The Commonwealth of Massachusetts

STATE COLLEGE AT BOSTON



CATALOGUE 1964-1965

625 HUNTINGTON AVENUE BOSTON, MASSACHUSETTS 02115

BULLETIN

FOR SERVICE

STATE COLLEGE AT BOSTON

625 HUNTINGTON AVENUE
BOSTON, MASSACHUSETTS 02115

CATALOGUE 1964-1965



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COLLEGES AND SECONDARY SCHOOLS

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CALENDAR 1964-1965

September 9-10				Freshmen Orientation & Registration
September 11-15				. Registration for Upper Classes
September 16				Classes Begin
October 12.				Columbus Day
November 10				End of First Quarter
November 11				Veteran's Day
November 26-27				Thanksgiving Recess
December 17—J	anua	ry 3	1965	Christmas Recess
January 4 .			•	Classes Resume
January 18-29				Mid-Year Examinations
January 29 .				End of First Semester
February 2-3				Registration
February 4 .				Classes Begin
February 22				Washington's Birthday
March 17 .				. Evacuation Day—St. Patrick's Day
March 23-26				Graduate School Final Examination
March 26 .				End of Third Quarter
March 29 .				. Beginning of Student Teaching for Graduate Students
April 16 .				Good Friday
April 17-23 .				Spring Recess
May 2-8 .				Junior Week
May 24 .				Final Examinations Begin
June 7-11 .				Senior Week
June 13 .	•			Commencement

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GENERAL INFORMATION

In September, 1964, the institution now known as the State College at Boston begins its one hundred thirteenth year of education for service. Under the direction of the Trustees of State Colleges, the college operates as a commuter institution, offering programs in the liberal arts and in teacher education. Conveniently located in the educational and cultural center of the city, the State College at Boston serves the educational needs of a constantly growing number of students from metropolitan Boston.

HISTORY

The college began operation in 1852 as the Boston Normal School. It functioned as the teacher training agency for the City of Boston Public Schools for a full century. The Normal School era lasted until 1924, when the school became the Teachers College of the City of Boston. As a teachers college, it broadened its offerings, provided a five-year program leading to the Master of Education degree, and offered degrees through the extension division.

In 1952, the Board of Education of the Commonwealth of Massachusetts assumed control, and the college became the State Teachers College at Boston. As a state institution, the college began a period of steady growth and expansion of offerings. In 1960, the title of the college was changed to State College at Boston, and the power to grant degrees in liberal arts was given. Expansion in curriculum has paralleled expansion in undergraduate enrollment, which has grown from approximately 600 in 1952 to nearly 2,500 in 1964.

PURPOSE

The motto of the College is "Education for Service." In both its liberal arts and teacher training programs the college aims at the fullest possible development of the individual through general education, professional training and specialization, and participation in college activities. The graduate should be prepared for full and effective participation in the life of the community, state, and nation. To fulfill this purpose, the college aims to provide educational opportunities for as many qualified students as its facilities and resources will allow.

ACCREDITATION AND AFFILIATION

The State College at Boston is accredited by the New England Association of Colleges and Secondary Schools.

The college has institutional membership in the American Association of Colleges for Teacher Education, the Eastern States Association of Professional Schools for Education, the New England Teacher Preparation Association, the Association of State Colleges and Universities, and the American Association of Colleges.

CAMPUS

Location and Environment

The State College at Boston is located on Huntington Avenue between Longwood Avenue and Evans Way in Boston's educational and cultural center. In the immediate vicinity are Simmons, and Emmanuel Colleges, the Harvard Medical and Dental Schools, Wentworth Institute, Northeastern University, and the Massachusetts College of Art. The Boston Museum of Fine Arts and the Isabella Stewart Gardner Museum offer unusual cultural advantages both in their collections and through their fine concerts and lectures.

BUILDINGS

Administration Building

The Administration Building contains the office of the President and those of other administrative departments. The college library is also located here, as are the facilities of the Department of Foreign Languages, which include a modern language laboratory.

Collins Building

Here are the offices and classrooms of the Departments of Mathematics, Art, and Music. In the basement is a large student lounge area.

North Building

This building contains North Hall, a large auditorium, and houses the Departments of English, History, and Political Science.

Science Building

The Science Building, completed in 1964, offers modern facilities for the teaching of a wide range of course offerings in Biology, Chemistry, Geography and Earth Science, and Physics. The lower floors contain the cafeteria, lounges for students and faculty, offices for student organizations, and the offices of the Dean of Students.

Gymnasium

The Gymnasium Building contains offices and facilities for both men's and women's physical education. An addition to this building, scheduled for construction soon, will offer greatly expanded facilities.

ADMISSIONS

The office of the Director of Admissions is located in the Administration Building. Inquiries concerning application for admission to undergraduate programs should be made to the Director of Admissions. Admissions for Graduate programs are handled by the office of the Dean of Graduate Studies. The following regulations apply only to undergraduate programs:

I. General Requirements

A. Graduation from high school with 16 units of work or equivalent preparation.

- B. Successful completion of the Scholastic Aptitude Test and three Scholastic Achievement Tests administered by the College Entrance Examination Board. One Achievement Test *must* be English. This college does not accept the writing sample as one of the three tests.
- C. Good health as evidenced by a physical examination report by personal physician.
- D. Interview by college faculty members.
- E. An admission application submitted after the close of the first marking period of the senior year and the high school record and rating of personal characteristics submitted by the high school principal to the college.

II. Early Acceptance

An applicant may be accepted by a college after the first quarter or marking period of the senior year if he has:

- A. Completed successfully the Scholastic Aptitude Test and achievement tests.
- B. A 3.0 (B) average in the highest 16 units of high school work.
 - 1. Eight units must be as follows:

English (including grade 12) 4 units
College Preparatory Mathematics 2 units
American History and Government 1 unit
Biology, Physics or Chemistry 1 unit
Applicants for Bachelor of Arts Program must
also present 2 units in a foreign language.

2. The 16 units must be distributed so that the number in any field will not exceed the following: English—4; social Studies—4; science—4; foreign language—7 (no credit accepted for less than 2 units in a language; mathematics—4; business—2; fine arts and industrial arts—2; home economics—2. Language majors may count an additional unit in a foreign language.

III. Regular Acceptance

A. A student not eligible for early acceptance may qualify for regular acceptance if he meets the general requirements and has the following high school units:

English (including grade 12) 4 units
Mathematics 2 units
American History 1 unit
Science 1 unit

B. Applicants for the Bachelor of Arts program must also present 2 units in a foreign language.

IV. Admission to Advanced Standing

Applicants for admission to advanced standing and seeking transfer of credits from other colleges and universities must meet the general admissions requirements and must submit official transcripts and letters of recommendation from the deans of all post-secondary institutions attended.

TUITION AND FEES

Registration Fee: Each entering student must pay a registration fee of \$20.00 following notification of acceptance. This fee is non-refundable, but is deducted from the first tuition payment of students who attend. A \$2.50 registration fee is required of each student attending classes in the Program of Continuing Studies.

Tuition

I. For Residents of Massachusetts

- a. Full-time attendance—\$200.00 a year payable in two installments at the beginning of each semester.
- b. Part-time day students—\$7.00 per semester hour.
- c. Continuing Studies and Summer Session—\$18.00 per semester hour.

II. For Non-Residents of Massachusetts

- a. Full-time attendance—\$600.00 a year payable in two installments at the beginning of each semester.
- b. Part-time day students—\$21.00 per semester hour.
- c. Continuing Studies and Summer Sessions—\$25.00 per semester hour.

Student Activities Fee: \$30.00 per year. Every undergraduate student (except in Continuing Studies) is required to pay this fee.

GENERAL REGULATIONS

Registration

- 1. Registration dates. Students should register on the registration dates announced in the College calendar. Permission of the Registrar should be secured for registration on dates other than those assigned.
- 2. Curriculum Advisors. Students working toward degrees in Liberal Arts or in secondary education must consult the chairman of their major department (or his representative) before electing courses.

- 3. Course Load. Fifteen semester hours is the normal minimum course load. Eighteen semester hours is the normal maximum. Students who wish to register for more than eighteen semester hours must secure permission from their deans.
- 4. Transfer of Credits. Students regularly enrolled who wish to secure credit for courses taken at other institutions or in the Summer Session must secure permission from their deans prior to enrolling for these courses.
- 5. Withdrawal from courses. Students may withdraw from courses without penalty only during the first half of a semester and with the permission of their deans. Otherwise a grade of 0 is recorded for the course.
- 6. Withdrawal from the college.

Students who find it necessary to withdraw from the College should do so only after consultation with their Deans.

Until a student withdraws officially, he is registered in all courses and will receive grades appropriate to his performance. Students who cease attending classes without officially withdrawing will receive grades of 0.

Attendance

Regular attendance at all classes is essential if a student is to receive full benefit from his studies. Attendance is taken in each class by the instructor. Absence in any course in excess of twenty percent of the class sessions in the semester will result in loss of credit for that course.

Academic Standing

Effective September, 1964, the following quality-point ratio system will be in force at State College at Boston:

$$A = 4$$
, $B = 3$, $C = 2$, $D = 1$, $F = 0$.

A student must maintain a ratio of 1.5 at the end of the Freshman year, 1.75 at the end of the sophomore year, 2.0 at the end of the junior year and senior year, and the student must have a final ratio of 2.0 in order to graduate. All ratios are cumulative. A student must be dropped from the college at the end of the first semester of the freshman year if his ratio is below 1.0.

A student who is dropped because of failing grades due to illness, home difficulties, or similar circumstances may be given permission to repeat the year at the discretion of the president.

The determination of quality points is made at the end of each college year and, excepting when the year is repeated, the number of points is not affected by grades in courses subsequently taken and passed.

"F" grades can never be removed, but the subjects in which they have been received must be repeated and passed, or, in the case of electives, other approved courses must be taken and passed either in approved summer sessions, or when possible, during the regular college year. Continuing subjects in which "F" grades have been received must be successfully repeated before the student may take advanced work.

The grade for a repeated or alternate course will be recorded in the

college records as follows: "Repe	ated or alternate course
p	assed at
with the grade of	,,

STUDENT SERVICES

Guidance

Orientation: An orientation program under the supervision of the Deans of Students, is provided for new students at the beginning of the fall term. It includes testing, health examinations, introduction of student and administration officers, and exploration of college services, curricula, and activities.

Counseling: The offices of the Dean of Men and Dean of Women offer educational and personal counseling services.

Health

The health office is located in the Administration Building. A registered nurse is on duty at all times during the school day.

Scholarships and Loans

The college itself has no scholarships fund to offer to its students. Loans may be obtained under the National Defense Education Act Student Loan Fund program. Application forms for loans under this program may be obtained by writing to the Institutional Representative, National Defense Education Act (NDEA) at the college.

Library

The college library is located in a wing of the Administration Building. Materials for research and course assignments are located for easy accessability.

The library collection has doubled in the last five years and several thousand volumes are added yearly. The periodical collection provides excellent coverage of scholarly journals and professional periodicals. A large curriculum library, useful for students in the teacher preparation programs, is located in the mezzanine. Library facilities include quiet areas for study and research, specially equipped rooms for listening to phonograph and tape recordings, and microfilm readers.

ORGANIZATIONS AND ACTIVITIES

Student Government Association

Every student is a member of the Student Government Association. Through its officers and representatives, the Association oversees student activities and represents the student body in matters of student interest. The Association sponsors several social events for the whole student body, including the All-College Banquet, several dances, a musical, and a drama contest.

Athletics

The Athletic program at the college is based on the premise that athletics in the total educational process is of tremendous value to both the individual and to his college.

At present Boston State is a member of the National Association of Intercollegiate Athletics and the New England State College Athletic Conference. Teams are sponsored in the following sports: Cross Country, Hockey, Basketball, Wrestling, Track, and Baseball. An active intramural program is operated throughout the school year. Intramural activities include: tag football, basketball, badminton, volleyball, boxing, golf and tennis. The coaching staff is composed of men nationally recognized as experts in their fields.

Women's Recreation Association

Each woman student is a member of WRA. An active member is one who receives credit for participation in activities during her career. The Association program offers opportunities both for the development of athletic skills and for social activity and exercise of leadership.

The WRA program includes golf, modern and folk dancing, tennis, archery, basketball, fencing, and badminton. Activities include cook-outs, splash parties, and playdays.

Volunteer Service

The Volunteer Service Bureau operates on the principle of service for others, aiding local agencies through recreation leadership, group work, guidance, and social services. Members offer unpaid service to agencies throughout Metropolitan Boston.

Publications

Chalkdust, the college newspaper, is published bi-weekly throughout the school year. Staff work is open to all students interested in gaining competence in writing and experience in newspaper work.

Spectrum, the college literary magazine, is published irregularly during the year. It offers opportunity for those interested in creative

writing and photography. Any member of the student body is eligible to contribute.

Lampas, the yearbook, is edited each year by members of the senior class.

Dramatics

Each year, several opportunities for participation in dramatics occur, in the presentation of the Drama Club, in the college musical, and in a one-act play contest. Participation is open to any interested student.

Lecture Society

Each year the Lecture Society sponsors a series of lectures by outstanding speakers and by figures in public life.

Clubs

A number of clubs and societies are maintained by the students to provide opportunities for activities of interest. These include religious clubs, Newman, Hillel, Protestant Student Association, and Orthodox Club. Other clubs relate to subject area such as French, Spanish, Psychology, Mathematics, Literature, and World Affairs.

UNDERGRADUATE CURRICULUM

The State College at Boston offers undergraduate programs leading to the degrees of Bachelor of Science in Education, Bachelor of Arts, and Bachelor of Science.

The B.S.Ed. degree is offered in three fields, kindergarten-primary, elementary, and secondary education. Candidates for the degree must fulfill the requirements in general education and complete the required program of professional preparation including practice teaching. For the degree in secondary education, a student must also complete, beyond the requirements of general education, at least twenty-four semester hours in a major academic field.

There are two curricula leading to the A.B. degree, one including teacher preparation, the other without this professional training. All candidates for this degree must complete beyond general education at least twenty-four semester hours in a major academic field. Those who elect the teacher-preparation program must complete at least twenty-four semester hours in secondary education, including practice teaching. Candidates for the non-teaching degree must complete, in addition to their major, at least eighteen semester hours in a minor academic field. All candidates for the A.B. degree must meet the degree requirements in foreign language and mathematics.

Each candidate for the degree of Bachelor of Science must complete beyond the required program of general education at least twenty-four semester hours in a major academic field and at least eighteen semester hours in a minor academic field. Each candidate for the B.S. degree must

also complete the degree requirements in mathematics.

Major and Minor Fields

Candidates in secondary education or a non-teaching program may choose a major from the following fields:

Biology French Mathematics Chemistry Geography Physics English History Spanish

A minor may be developed in any of the major fields or in any of the following:

Art Music Psychology

Earth Science Political Science

Honors Program

Students who have achieved high grades in their Freshman and Sophomore years may apply for admission into the honors program at the beginning of their Junior year. If admitted to this program, the candidate for honors must pursue a program of independent study and research under the supervision of an academic department. This will ordinarily lead to an undergraduate thesis or its equivalent. Students who complete this program satisfactorily will be awarded their bachelor's degree with honors.

OUTLINE OF CURRICULA

KINDERGARTEN-PRIMARY CURRICULUM

B.S. in Education

FIRST YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs
E101 English Composition	3	E102 English Composition	3
E103 Effective Speech	2	Hl102 Personal Health	2
H101 Western Civilization	3	H102 Western Civilization	3
PhEd101 Physical Ed.	0	PhEd102 Physical Ed.	0
P101 General Psychology	3	P102 Ed. Psychology	3
PS101 Physical Sciences	3	PS102 Physical Sciences	3
Elective	3	Elective	3
	_		_
	17		17

SECOND YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
A201 Art Appreciation	3	E202 Maj. Br. Writers II	3
P201 Child Development	2	H202 American History	3
E201 Maj. Br. Writers I	3	Ms202 Music Appreciation	3
H201 Am. History	3	BS202 Biology	3
PhEd201 Aquatics	0	Elective	3
BS201 Biology	3		
Elective	3		15
	_		
	17		

THIRD YEAR

First Semester	$Sem.\ Hrs.$	Second Semester	$Sem.\ Hrs.$
A315 Art for Kind-Prim.	3	A316 Arts & Crafts	1
Ed311 Communicative Arts	2	Ed312 Communicative Arts	2
Ed313 KindPrim. Principles	2	Ed314 KindPrim. Principles	2
G301 Geography	3	E321 Child. Lit.	2
M305 Basic Math.	3	M316 Prim. Sch. Math	2
PhEd301 Physical Ed.	1	G302 Geography	3
Elective	3	FA302 First Aid	1
	_	Elective	3
	17		
			16

FOURTH YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs
Phil401 General Philosophy	3	Ed400 Student Teaching	
Ms411 KindPrim. Music	3	and Seminar	14
E421 Maj. Am. Writers	3		_
Ed422 Ed. Measurement	2		14
BS421 Field Biology	3		
Elective	3		
	_		

17

ELEMENTARY CURRICULUM

B.S. in Education

FIRST YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs
E101 English Composition	3	E102 English Composition	3
E103 Effective Speech	2	Hll02 Personal Health	2
H101 Western Civilization	3	H102 Western Civilization	3
PhEd101 Physical Education	0	PhEd102 Physical Education	0
P101 General Psychology	3	P102 Ed. Psychology	3
PS101 Physical Sciences	3	PS102 Physical Sciences	3
Elective	3	Elective	3
	_		_
	17		17

SECOND YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
P201 Child Development	2	A202 Art Appreciation	3
E201 Maj. Br. Writers I	3	E202 Maj. Br. Writers II	3
H201 Am. Hist. & Govt. I	3	H202 Am. Hist. & Govt. II	3
Ms201 Music Appreciation	3	BS202 Biology	3
PhEd201 Aquatics	0	Elective	3
BS201 Biology	3		
Elective	3		15
	_		
	17		

THIRD YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
A325 Art for Elem. Sch.	3	A326 Arts & Crafts	1
Ed321 Communicative Arts	2	Ed322 Communicative Arts	2
Ed323 Principles & Methods		Ed328 Social Studies and Science	e
of Teaching	2	Methods	2
M305 Basic Math.	3	E321 Children's Lit.	2
PhEd301 Physical Education	1	FA302 First Aid	1
G301 Geography	3	G302 Geography	3
Elective	3	M326 Math. for Elem. Teachers	2
		Elective	3
	17		
			16

FOURTH YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs
Ed400 Student Teaching		Phil401 General Philosophy	3
and Seminar	14	Ed422 Educational Measurement	2
	_	E421 Maj. Am. Writers	3
	14	Ms422 Music for Elem. Grades	3
		BS422 Field Biology	3
		Elective	3

SECONDARY CURRICULUM

B.S. in Education

FIRST YEAR

First Semester	Sem. Hrs.	Second Semester	$Sem.\ Hrs.$
E101 English Composition	3	E102 English Composition	3
E103 Effective Speech	2	Hl102 Personal Health	2
H101 Western Civilization	3	H102 Western Civilization	3
PhEd101 Physical Education	0	PhEd102 Physical Education	0
PS101 Physical Sciences	3	PS102 Physical Sciences	3
Pl01 General Psychology	3	P102 Ed. Psychology	3
Elective	3	Elective	3
	_		_
	17		17

SECOND YEAR

First Semester	$Sem.\ Hrs.$	Second Semester	$Sem.\ Hrs.$
A201 Art Appreciation	3	Ms201 Music Appreciation	3
E201 Maj. Br. Writers I	3	P231 Adolescent Psychology	2
H201 Am. Hist. & Govt. I	3	E202 Maj. Br. Writers II	3
PhEd201 Aquatics	0	H202 Am. Hist. & Govt. II	3
BS201 Biology	3	BS202 Biology	3
Elective	3	Elective	3
	_		
	15		17

THIRD YEAR

First Semester	$Sem.\ Hrs.$	Second Semester	Sem. Hrs.
Ed337 Hist. & Pr. Sec. Ed.	3	FA302 First Aid	1
Ed333 Teaching Procedures	3	Ed336 Subj. Methods	3
Electives	9	Ed334 Curr. of Sec. School	2
		Electives	12
	15		
			18

FOURTH YEAR

First Semester	$Sem.\ Hrs.$	Second Semester	$Sem.\ Hrs.$
Ed430 Student Teaching	7	Fifteen Sem. Hrs. in	
Ed431 Tests & Measurements	3	Free Elective	15
Phil401 General Philosophy	3		_
E421 Maj. Am. Writers (Requir	ed of		15
non-English Majors)	3		
E433 Lang. Structure (Required	ł		
of English Majors)			

A.B. CURRICULUM

(Within Teacher Preparation Program)

FIRST YEAR

First Semester	Sem. Hrs.	Second Semester	$Sem.\ Hrs.$
E101 English Composition	3	E102 English Comp. II	3
E103 Effective Speech	2	Hl102 Personal Health	2
H101 West. Civ. I	3	H102 West. Civ. II	3
PhEd101 Physical Education	0	PhEd102 Physical Education	0
PS101 Physical Science I	3	PS102 Physical Science II	3
Language Elective	3	Language elective	3
Math. Elective	3	Elective	3
			_
	17		17

SECOND YEAR

First Semester	$Sem.\ Hrs.$	Second Semester	$Sem.\ Hrs.$
P101 Gen. Psych.	3	P231 Adol. Psych.	3
E201 Maj. Br. Writers I	3	E202 Maj. Br. Writers II	3
H201 American History I	3	H202 American History II	3
BS201 Biology I	3	BS202 Biology II	3
PhEd201 Aquatics	0	Electives	6
Electives	6		_
	_		18
	18		

THIRD YEAR

First Semester	Sem. Hrs.	Second Semester	Sem. Hrs.
Ed337 Hist. & Pr. Sec. Ed.	3	FA302 First Aid	1
Ed333 Teaching Procedures	3	Ed336 Subj. Methods	3
Electives	9	A201 Art Appreciation	3
		Electives	9
	15		_
			16

FOURTH YEAR

First Semester	Sem. Hrs.	Second Semester	$Sem.\ Hrs.$
Ed430 Student Teaching	7	Ed334 Curr. of Sec. Sch.	2
Ed431 Tests & Measurements	3	MS202 Music Appr.	3
Phil401 General Philosophy	3	Electives	9
E421 Maj. Am. Writers (Requir	ed		
for non-English Majors)	3		14
•			

16

A.B. CURRICULUM

(Non-Teaching)

FIRST	YEAK	
Sem. Hrs. 3 0 3 3 - 15	Second Semester E102 English Comp. II H102 West. Civ. II PhEd102 Physical Ed. PS102 Physical Science II Language Elective Elective	Sem. Hrs. 3 3 0 3 3 - 15
SECONI) YEAR	
Sem. Hrs. 3 3 3 0 6 — 15	Second Semester E202 Maj. Br. Writers II H202 American Hist. II BS202 Biology II Electives	Sem. Hrs. 3 3 3 6 - 15
THIRD	YEAR	
Sem. Hrs. 3	Ms202 Music Appreciation Plus: Twelve Sem. Hrs. in Major & Minor fields & Electives. (E332 Am.	Sem. Hrs.
12 15	English Majors)	12 - 15
FOURTH	H YEAR	
3 3 9 — 15	Second Semester Phil402 Mod. Philosophy Electives	Sem. Hrs. 3 12 - 15
	Sem. Hrs. 3 3 0 3 3 - 15 SECONI Sem. Hrs. 3 3 0 6 - 15 THIRD Sem. Hrs. 3 12 - 15 FOURTH Sem. Hrs. 3	3 E102 English Comp. II 3 H102 West. Civ. II 0 PhEd102 Physical Ed. 3 PS102 Physical Science II 3 Language Elective 3 Elective 15 SECOND YEAR Sem. Hrs. Second Semester 3 E202 Maj. Br. Writers II 3 H202 American Hist. II 3 B\$202 Biology II 0 Electives 6 15 THIRD YEAR Sem. Hrs. Second Semester 3 Ms202 Music Appreciation Plus: Twelve Sem. Hrs. in Major & Minor fields & Electives. (E332 Am. Lit. II required of English Majors) FOURTH YEAR Sem. Hrs. Second Semester 3 Phil402 Mod. Philosophy Electives 3 9 —

B.S. CURRICULUM

(Non-Teaching)

FIRST YEAR

	FIRST	YEAR	
First Semester E101 English Comp. I H101 Western Civ. I PhEd101 Physical Ed. Ph101 Physical Science Mathematics Elective	Sem. Hrs. 3 3 0 3 3 - 15	Second Semester E102 English Comp. II H102 Western Civ. II PhEd102 Physical Ed. Ph102 Physical II Electives	Sem. Hrs. 3 3 0 3 6 — 15
	SECON	D YEAR	
First Semester E201 Maj. Br. Writers I H201 American Hist. I Biol201 Biology I PhEd201 Aquatics Choice of: Two Electives	Sem. Hrs. 3 3 3 0 6 — 15	Second Semester E202 Maj. Br. Writers II H202 American Hist. II Biol202 Biology II Choice of: Two Electives	Sem. Hrs. 3 3 3 6 — 15
	THIRI) YEAR	
First Semester A201 Art Appreciation Plus: Twelve Sem. Hrs. of Major & Minor Fields & Electives	Sem. Hrs. 3 12 15	Second Semester Ms202 Music Appreciation Plus: Twelve Sem. Hrs. in Major & Minor Fields & Electives	Sem. Hrs. 3 12 15
	FOURT	H YEAR	
First Semester Phil401 Gen. Philosophy E421 Major Am. Writers Electives	Sem. Hrs. 3 3 9	Second Semester Phil402 Mod. Phil. Electives	Sem. Hrs. 3 12 - 15

15

GRADUATE SCHOOL

The Graduate School offers a full-time day program leading to the degree of Master of Education. A student is normally expected to complete the program in one year. During this year, a graduate of an approved college or university may prepare for teaching in either elementary or secondary schools. Those who have previously completed a program of teacher preparation are not eligible for admission to the day Graduate School.

In the secondary program students must elect one of the following major fields:

English History Science

Foreign Language Mathematics

Appropriate undergraduate preparation is required in the student's major field.

Further information on the Graduate School may be obtained by writing to the Dean of Graduate Studies.

ELEMENTARY CURRICULUM

First Semester	$Sem.\ Hrs.$	Second Semester	Sem. Hrs.
Elementary School		Third Quarter	
Ed521 Materials and Methods	10	Ed525 Philosophy of Education	3
P522 Educational Psychology	3	Ed501 Thesis	3
Ed505 Research Methods	2	Ed523 Educational Measurement	2
	_	E521 Children's Literature	2
	15	Fourth Quarter	
		Ed527 Student Teaching	
		and Seminar	7
			—
			17

SECONDARY CURRICULUM

SECONDINAL COMMISCE					
$Sem.\ Hrs.$	Second Semester	$Sem.\ Hrs.$			
3	Third Quarter				
2	Major Field II	2			
3	Elective	2			
3	P502 Psychology II	2			
3	Phil532 Philosophy II	2			
2	Ed501 Thesis	2			
_	Fourth Quarter				
16	Ed500 Teaching and Seminar*	7			
		17			
	3 2 3 3 3 2	3 Third Quarter 2 Major Field II 3 Elective 3 P502 Psychology II 9 Phil532 Philosophy II 2 Ed501 Thesis Fourth Quarter			

^{*250} Clock hours of Practice teaching.

PROGRAM OF CONTINUING STUDIES

This program admits candidates for the degree of Master of Education and also candidates with advanced standing for the degree of Bachelor of Science in Education. Classes in the Program of Continuing Studies are held in the late afternoon, in the evening and in the morning during the summer. More detailed information may be obtained by writing to the Director of the Program of Continuing Studies.

DEPARTMENTS

AND

COURSES OF INSTRUCTION

ART

The courses offered by the department of art are designed to develop perception, imagination, intelligence and creativity. In order to foster these abilities and to promote a general understanding of man's aesthetic nature, a program in both the theoretical and the practical aspects of art has been provided.

A101.—Introduction to Drawing and Painting (A). Elective for Freshmen and Sophomores. The course explores the basic principles and elements of design found in nature and in art. Materials used will include pencil, charcoal, crayon, pen and ink, watercolor, poster paint, and other graphic media. Three hours a week. Three semester hours.

A102.—Introduction to Drawing and Painting (B). Prerequisite A101. This course is a continuation of A101. The principles learned in the first semester will be applied to projects in lettering, perspective, figure drawing and illustration. The student will be encouraged to develop a personal mode of expression. Three hours a week.

Three semester hours. A201.—Art Appreciation. Required of Sophomores. This course introduces the student to the study of aesthetics (the philosophy of art). Analyses of important writings in aesthetics are given. The course begins with a discussion of the fundamental ideas underlying all artistic activity and with methods of analyzing works of art. The material will include the development of styles, and significant works of each period, from prehistoric to contemporary times. Illustrated lectures are supplemented by assigned readings in the history and criticism of art and by visits to the museums and collections in the vicinity of the college. Three hours a week.

A203.—Intermediate Drawing and Painting (A). Elective for Sophomores and Juniors. Prerequisite A101 and A102. This course further develops the principles of design in the graphic arts and painting. Three hours a week.

Three semester hours.

A204.—Intermediate Drawing and Painting (B). Prerequisite A203. The second semester will continue the exploration of painting methods and materials. The styles of contemporary painters will be analyzed and emulated. Three hours a week.

Three semester hours.

A301.—Advanced Drawing and Painting (A). Prerequisite A203 and A204. This course introduces the student to the fundamentals of oil painting. Studies of the figure, portrait, still life, and landscape will be executed. Three hours a week.

Three semester hours.

A302.—Advanced Drawing and Painting (B). Prerequisite A301. In the second semester the student will be expected to develop a personal style of expression through work in realistic and abstract oil paintings. Three hours a week. (Not offered 1964-1965.) Three semester hours.

A303.—The Arts of the United States. Elective for Juniors and Seniors. The course will cover painting, sculpture and architecture in America from the time of the colonies to the present. "Revival Periods" and Contemporary styles will be discussed and analyzed. The decisive role of the arts and the artist in American life will be explored. Three hours a week. (Not offered 1964-1965.)

A304.—Modern and Contemporary Art. Elective for Juniors and Seniors. The course traces the development and influence of man's activities in Europe and the Americas in the twentieth century and its effect upon painting, sculpture, and architecture, and the minor arts. Three hours a week. (Not offered 1964-1965.)

A315.—Art for the Kindergarten-Primary Level. Required of Juniors who have elected the Kindergarten-Primary curriculum. A study of the foundations and current objectives of educators and their application to the grade levels concerned within this course. Analysis of stages of progress in the visual expression of the very young child. An inquiry into the contemporary theories of art and art education. Introduction to creative research in order to design and develop projects for teaching art. Three hours a week (either semester).

Three semester hours.

A316.—Arts and Crafts. Required of Juniors who have elected the Kindergarten-Primary curriculum. A studio course designed to give a working knowledge of the basic techniques in two and three dimensional art deemed essential on the kindergarten-primary levels. It consists of working with the following media and techniques: clay modeling, paper and box sculpture, crayon resist, papier mache, weaving, stitchery, vegetable printing, stencil, scrap material project, elementary graphic printing, collage, and others used in these grades. Two hours a week (either semester).

One semester hour.

A325.—Art for the Elementary School. Required of Juniors who have selected the Elementary Curriculum. An introduction to various philosophies of art education, past and present. This course is designed to acquaint future teachers with the wide scope in the various areas of child growth and development as related in their art. Included will be research, experiments in the use of materials, experience in various forms

of visual expressions, design and its application and methods of teaching art creatively. Three hours a week (either semester).

Three semester hours.

A326.—Arts and Crafts. Required of Juniors who have elected the Elementary Curriculum. A workshop course designed to introduce the student to the wide variety of media and materials, and the use of these in two and three dimensional art projects. Media include: paper, cardboard, clay, soap, plaster, ink, crayon, and tempera paint. Projects include paper sculpture in construction paper, cardboard, and papier mache; additive sculpture in clay and wire; subtractive sculpture in wax, plaster or firebrick; the three printing processes, and other craft principles used in the elementary school. Experience in these areas will equip the student for exploration in other areas of art experience. Two hours a week (either semester).

A401.—Drawing and Painting Workshop. Prerequisites A301 and A302. Elective for Seniors who have completed all of the Art Elective courses. Continuation of ceramics employing advanced techniques. Experience with the following painting media: oil, gouache, polymer tempera, egg tempera and casein. Three hours a week. (Not offered 1964-1965.)

Three semester hours.

A403.—Art Media, Process and Practice. Prerequisite A101 and A102. Elective for Juniors and Seniors. In this course, opportunity is given to the student to become acquainted with media and to develop a better understanding of the objectives, principles, and practices of art expression—to experience methods and materials of both two and three dimensional design in order to stimulate and further his creative thought and development. Opportunity for experimentation in a variety of media will be stressed. Four hours a week (two double periods). (Not offered 1964-1965.)

A404.—Volume Design. Elective for Juniors and Seniors. Prerequisite A101 and A102. A course devoted to discovering the principles of form and space in architecture, sculpture and other three-dimensional arts. Students will work with a variety of sculptural materials including plaster, clay, wood, etc. Four hours a week (two double periods).

Three semester hours.

BIOLOGY

To complete the work for a major, the student must complete at least 24 semester hours in biology. Certain of the advanced courses require the previous completion of work in general chemistry, organic chemistry, mathematics, and preferably biochemistry and physics. This background provides a related minor in general science.

Students may also develop a minor in biology. In addition to the required Biology I and II, electives to complete requirements for these students may be selected from the following:

Bi203.—Cryptogamic Botany.

Bi301.—Vertebrate Morphogenesis.

Bi303.—Histology and Histological Techniques.

Bi305.—History of Biology.

Bi402.—Genetics.

Bi406.—Biological Practices and Techniques.

Bi407.—Field Biology.

Bi101-102.—Freshman Orientation Seminar. Expected of all future biology majors. Current developments in biology will be discussed. An opportunity will be given to become familiar with the use of microscopes and other departmental equipment. One hour a week.

No credit.

Bi201.—**Biology I.** Required. The course introduces the student to the principles and problems basic to an understanding of life processes. The greater emphasis is placed upon the angiosperm plant. Lectures and discussions are planned to broaden the concepts gained from laboratory work. Four hours a week

Three semester hours.

Bi202.—Biology II. Required. Prerequisite Bi201. Emphasis is upon animal life. Application is made of the major principles learned in Bi201. Lectures, demonstrations, laboratory work, and readings will be used. Four hours a week.

Three semester hours.

Bi204.—Cryptogamic Botany. Elective. Prerequisite Bi201. A consideration of the structure, functioning, and life cycles of significant representatives of the algae, fungi, lichens, liverworts, mosses, and ferns. Two lectures, two hours in laboratory.

Three semester hours.

Bi205-206.—Sophomore Seminar. Expected of all future biology majors. Others with special interest may apply. The laboratory problems treated in the sophomore biology course will be developed in greater depth. One hour a week.

No credit.

Bi301.—Vertebrate Morphogenesis. Elective. Prerequisite Bi201-202. An integration of vertebrate comparative anatomy and embryology which considers mechanisms, interdependence, and the factors underlying structural transformations. Two lectures, six hours in laboratory. (Not offered 1964-1965.)

Five semester hours.

Bi303.—Histology and Histological Techniques. Elective. Prerequisite Bi201-202. A study of cells and tissues with attention given to their relation to the anatomy and physiology of the whole organism. Practice will be given in the preparation of tissues for microscopic study. Two lectures, two hours in laboratory. (Not offered 1964-1965.)

Three semester hours.

Bi304.—Introduction to Experimental Biology. Required of biology majors. Prerequisites Bi201-202, Bi204, Ch101-102. An introduction to the practical working of the scientific mind through participation both

as an individual and as a team member in work on a series of investigatory units. Six hours in laboratory. (Not offered 1964-1965.)

Three semester units.

Bi305.—**History of Biology.** Elective. A survey of the evolution of knowledge of the biotic world leading to a concept of the present state of biological science and the problems it faces. One lecture. (Not offered 1964-1965.)

One semester hour.

Bi401.—Cellular Physiology. Elective. Prerequisites Bi201-202, Ch101-102, Ch301. Ch402 is strongly recommended. A study of the major problems of plant and animal physiology as seen in the single cell. Functional organization, exchange of materials across cell membranes, energy and matter transformation, irritability, contractility, growth, and cell division will be studied. Two lectures, four hours in laboratory. (Not offered 1964-1965.)

Bi402.—Genetics. Elective. Prerequisite Bi201-202. An introduction to the principles and physical basis of heredity. Laboratory experiences will include fundamental techniques used in modern genetic research. Two lectures, two hours in laboratory. (Not offered 1964-1965.)

Three semester units.

Bi404.—Microbiology. Elective. Prerequisites Bi201-202, Ch101-102, Ch301. Fundamentals of structure, growth, and habitat of the major groups of microorganisms. Laboratory experiences will give training in the basic methods of observation, propagation, and study of microorganisms. Two lectures, four hours in laboratory. (Not offered 1964-1965.)

Bi405.—Special Problems in Biology. Open only to biology majors. Prerequisite Bi304. Investigations into an open-ended biological problem chosen from the student's special interests and needs. Four hours in laboratory. (Not offered 1964-1965.)

Bi406.—Biological Practices and Techniques. Elective for all Senior students except biology majors. An introduction to the scientific techniques used in biological studies. Methods of collecting, processing, and culturing algae and protozoa, maintainance of living forms in the laboratory will be included. Prerequisites are Bi201-202. Three hours in class.

Bi408.—Coordinating Seminar in Biology. Open only to biology majors. Readings, lectures, and discussions designed to unify and strengthen the background of students in modern biology. Two hours in class.

Two semester hours.

Bi421.—Field Biology. Given in both semesters. Required of all Seniors in the kindergarten and elementary curricula. Elective for all others in either the Senior or Junior year. Essentially a course in natural history stressing the study of local plant and animal life. Identification, adaptation, and ecological relationships are the areas of approach.

Conservation problems and current practices are discussed throughout the course. Three hours in class.

Three semester hours.

Bi536.—Biological Science for Secondary Teachers. Elective for graduate students who are preparing to teach science on the secondary level. The rationale of the Biological Science Curriculum Study is the basis of the course. Attention is given to the development of demonstration and laboratory techniques. The use of living materials is stressed. Four class hours. One quarter.

ELEMENTARY EDUCATION

The elementary and kindergarten-primary curricula have as a principal objective the thorough professional preparation of teachers at the levels indicated. To this end basic courses are offered and required in general and specific methods of teaching. In addition, experiences in the evaluation of learning and observation of youngsters in the classroom room setting are considered essential. To these areas of preparation is added a full semester of supervised student teaching.

Ed311.—Communicative Arts, Reading. Required of Juniors who elected the Kindergarten-Primary curriculum. A study is made of the basic principles, pertinent techniques, and research relating to the fundamentals of the teaching of reading at the Primary level. Curriculum guides, basal reading systems, reading tests, and visual aids are examined. Three hours a week, first semester.

Two semester hours.

Ed312.—Communicative Arts, Language. Required of Juniors who elected the Kindergarten-Primary curriculum. The language course deals with a study of language development, language experiences and techniques for language teaching at the Primary level. The techniques of handwriting and spelling are included in the study of written communication. Three hours a week, second semester. Two semester hours.

Ed313-314.—Kindergarten-Primary Principles. Required of Juniors who have elected the Kindergarten-Primary curriculum. This course presents techniques of teaching in the Kindergarten and Primary Grades. Observation and participation in classroom situations in the laboratory school are provided. Two class hours a week throughout the year.

Four semester hours.

Ed321.—Communicative Arts, Reading. Required of Juniors who elected the Elementary curriculum. A study is made of the nature of the reading process, the history and the development phases of the reading program, and the principles for effective teaching of reading. A survey is made of curriculum materials and basal reading series currently employed in the elementary schools. Three hours a week, first semester.

Two semester hours.

Ed332.—Communicative Arts, Language. Required of Juniors who elected the Elementary curriculum. The language course deals with the sequences of language development, the types of language experi-

ences, and specific techniques for teaching language, handwriting, and spelling at the primary and upper elementary level. Three hours a week, second semester.

Two semester hours.

Ed323.—Principles and Current Techniques of Teaching. Required of Juniors who elected the Elementary Curriculum. This course includes a study of the teaching-learning process, desired learning outcomes, and the guiding principles for effective planning and teaching in the elementary school. Two class hours per week, first semester. In addition there will be ample opportunity to observe and participate in the classrooms of the laboratory school.

Two semester hours.

Ed328.—Social Studies and Science Methods. Required of Juniors who have elected the Elementary Curriculum. An examination of the methods and materials basic to carrying on a program in social studies and science in the elementary grades. Two hours a week, second semester.

Two semester hours.

Ed400.—Student Teaching and Seminar. Required of Seniors in Kindergarten-Primary and Elementary courses. A laboratory course of sixteen weeks duration providing full-time student teaching in public schools and affording many opportunities for application and extension of the understandings developed during the previous professional courses. The practice-teaching period is divided into two segments at differing instructional levels. Under the guidance of the regular classroom teacher and the college supervisor, the student is expected to assume an increasing responsibility for the total teaching-learning situation. One day each week the student teachers return to campus for the Seminar which provides opportunities for meeting and solving individual and group problems arising from experiences in the classroom. In addition, the Seminar is concerned with topics such as professional ethics, school records, securing a teaching position, current trends in education, and in-service professional growth. Fourteen semester hours.

Ed422.—Educational Measurement. Required of Seniors who have elected the Elementary or Kindergarten-Primary programs. A survey of measurement and evaluation procedures as they apply to the day by day activities of the elementary school teacher. Two hours a week, either semester.

Two semester hours.

Ed500.—Student Teaching and Seminar. Required of Graduate Students. A laboratory course of eight weeks duration providing full-time student teaching in public schools. This course is designed to give the graduate students a practical application of the principles developed in the previous professional courses. Each student is assigned to an experienced classroom teacher who guides and trains him for the eight weeks. A college supervisor visits him at least three times and coaches him in his work. One day each week the student teacher returns to campus for the Seminar at which individual and group problems are discussed.

Seven semester hours.

Ed501 (or Ed527).—Thesis. Each graduate student must write a thesis of from ten thousand to twenty thousand words in length on a subject in his field.

Two semester hours.

Ed505.—Research and Evaluation. A required course in the Graduate School. The course covers (1) the scholarly use of libraries, (2) the selection, delimitation and outlining of topics for study, (3) proper documentation of term papers and thesis, (4) definitions of research, (5) research methods and techniques, and (6) the evaluation of research.

Two semester hours.

Ed521.—Elementary School Methods and Materials. Required of graduate students who are preparing to teach in the elementary schools. A presentation of the various areas of the curriculum in a unified fashion. Specific attention will be given to the construction of the curriculum, techniques of teaching common to the several subject matter areas, materials and methods unique to the teaching of reading, language, arithmetic, social studies, science, art and music. Provision will be made for observation and limited practice teaching in the laboratory school. Eleven hours a week.

Ed523.—Educational Measurement. A survey of the nature of measurement and evaluation in relation to the process of teaching. The course will emphasize the construction of tests, the evaluation of standardized instruments and the statistical ideas and operations needed for proper interpretation and use of test results. Four hours a week, third quarter.

Two semester hours.

SECONDARY EDUCATION

This department offers those courses which give the student the necessary qualifications for teaching in a secondary school. Theory and practice are inter-related to provide the finest possible experience for entrance into the educational profession.

Ed333.—Procedures for Teaching in the Secondary School. Required of Juniors in the Secondary Education curriculum. This course includes a study of the nature and the developmental tasks of the adolescent; the role of the teacher in establishing a favorable setting for learning; routines and procedures for class organization; the handling of discipline; planning for unit and daily teaching; individual and group methods of instruction; evaluative techniques; and the guidance responsibilities of the teacher. A series of observations will be made in the laboratory school and in secondary schools of neighboring communities. Three hours a week, first semester.

Ed334.—Curriculum of the Secondary School. This course is required in the Secondary Education program. Among the major topics to be covered in this course are the following: horizontal and vertical patterns

of organization; criteria for curriculum evaluation; application to modern curriculum guides; trends in curriculum development, such as lifeadjustment education, cooperative education, team-teaching, and summer-school programs. Two hours a week, second semester.

Two semester hours.

Ed336-E.—Methods of Teaching English in the Secondary School. Required of Juniors majoring in English in the Secondary School Curriculum. This course includes a consideration of the aims and principles involved in the teaching of grammar, composition, and literature. Classroom experiences are provided at the laboratory school. Three hours a week, second semester.

Three semester hours.

Ed336-L.—Methods of Teaching Modern Languages in the Secondary School. Required of Juniors majoring in French or Spanish in the Secondary School Curriculum. This course includes a consideration of the principles of language learning along with the methods and materials for teaching modern languages. Classroom experiences are provided. Three hours a week, second semester.

Three semester hours.

Ed336-M.—Methods of Teaching Mathematics in the Secondary School. Required of Juniors majoring in Mathematics in the Secondary School Curriculum. This course includes a consideration of the aims and principles involved in the teaching of Mathematics. Classroom experiences are provided at the laboratory school. M335 is a prerequisite. Three hours a week, second semester.

Three semester hours.

Ed336-PS.—Methods of Teaching Science in the Secondary School. Required of Juniors majoring in Science in the Secondary School Curriculum. This course includes a consideration of the aims and principles involved in the teaching of astronomy, biology, chemistry, geology and physics. Classroom experiences at the laboratory school are provided. Three hours a week, second semester.

Three semester hours.

Ed337.—History and Principles of Secondary Education. This course is required of all Juniors in the Secondary Education Program. It will examine the historical foundations of secondary education in the United States with its particular reference to early and contemporary European schools. The principles of secondary education are based on the aims and purposes of our schools and their necessary articulation with elementary and higher education. Topics to be covered in this course include a history of early secondary education in America and Europe, purposes of our schools, leaders in the profession, the development of local, state and federal responsibilities, legal statutes, comparative and contemporary problems in education. Three hours a week, first semester.

Ed430.—Student Teaching and Seminar. Required of Seniors in the Secondary Curriculum. A laboratory course of eight weeks duration providing full-time student teaching in public secondary schools and

affording opportunities for application and extension of the understandings developed during the previous professional courses. Under the guidance of the regular classroom teacher and the college supervisor, the student is expected to assume an increasing responsibility for the total teaching-learning situation. One day each week the student teachers return to campus for the Seminar which provides opportunities for meeting and solving individual and group problems arising from experiences in the classroom. In addition, the Seminar is concerned with topics such as professional ethics, school records, securing a teaching position, current trends in education, and in-service professional growth.

Seven semester hours.

Ed431.—Tests and Measurement. Required of students studying secondary education. This course includes the development of measurement in education and the statistical analysis of test results. General principles of test construction as well as the construction of specific types of item are studied. Projects are originated for use in testing programs. Recent achievements and intelligence tests at the secondary level are examined, members of the class also assist in testing programs. Six hours a week, first quarter.

Three semester hours.

Ed505.—Research and Evaluation. A required course in the Graduate School. The course covers (1) the scholarly use of libraries; (2) the selection, delimitation and outlining of topics for study; (3) proper documentation of term papers and theses; (4) definitions of research; (5) research methods and techniques, and (6) the evaluation of research.

Two semester hours.

Ed533.—Secondary Administration. Required of graduate students who are preparing to teach in secondary schools. Basic concepts in this course include: (1) the meaning of education in a democracy; (2) democracy in education, with special reference to individual differences in pupil capabilities and needs; (3) curriculum adaptations; (4) methods of teaching; (5) pupil organization for class instruction and co-curricular activities; (6) evaluation of pupil growth and development; (7) steps to be taken in the process of modernizing the school with special reference to organization and administration problems. Three hours a week, first semester.

Ed536-E.—Methods of Teaching English. Required of graduate students who are preparing to teach English at the secondary level. This course includes (1) a consideration of the aims and principles involved in the teaching of composition and literature; (2) the readings of representative texts and scientific studies; (3) the preparation and presentation of units of work meeting the needs of typical classroom situations. Two hours a week, first semester.

Two semester hours.

Ed536-F.—Methods of Teaching French. Required of graduate students who are preparing to teach French in the secondary school. Modern

theories on the teaching of foreign language. Subject matter and techniques in the teaching of French in Grades VII-XII. Two hours a week, first semester.

Two semester hours.

Ed536-Sp.—Methods of Teaching Spanish. Required of graduate students preparing to teach Spanish in secondary schools. The course includes a study of modern theories of teaching foreign languages; subject matter, methods, and materials for Grades VII-XII. Two hours a week, first semester.

Two semester hours.

Ed536H.—Methods in Social Studies. Required of graduate students who are preparaing to teach social studies at the secondary level. This course includes a consideration of the aims and principles involved in laboratory school. Two hours a week, first semester.

teaching of social studies. Classroom experiences are provided at the

Ed536-M.—Methods of Teaching Secondary School Mathematics. Required of graduate students who are preparing to teach in secondary schools. In this course instruction is given in methods of teaching mathematics in Grades VII-XII, including percentage, measurement, and elementary algebra. Demonstration lessons are a part of the course. Two hours a week, first semester.

Two semester hours.

Ed536-PS.—The Teaching of General Science. Required of graduate students who are preparing to teach science at the secondary school level. Representative topics to be treated include the techniques of demonstration, the selection and use of reference material and test material, class projects and the maintenance and procurement of science supplies. Directed discussion and individual project work. Two hours a week, first semester.

ENGLISH

The department of English offers to all students instruction in writing and speech, and introductory courses in British and American literature. It further offers courses in linguistics and in literature, by period or type, from Chaucer to the present day. Students majoring in English take at least twenty-four semester hours in the field exclusive of prerequisite courses (E101-2, 103, 201-2). The following courses are required in the teacher training curriculum: E101-2, 103, 201-2, 321 (elementary division), 331-2 (English majors, secondary division), 423 (English majors). The required courses in the non-teaching curriculum are E101-2, 201-2, 331-2 (English majors), 421 (non-English majors), 434 (English majors).

A student must have credit for E101-2 and 201-2 before taking courses numbered 301 and higher.

E101-102.—English Composition. Required of Freshmen. The course includes a review of formal grammar, training in sentence structure and paragraph development, and instruction in the writing of expository themes. Assigned readings. Three hours a week, both semesters.

Six semester hours

E103.—Effective Speech. Required of Freshmen in all teacher preparation programs. The course has as its objective developing effective voices in the students and preparing them to meet the demands of the speech situations which they will encounter in their professional lives. Two hours a week, either semester.

Two semester hours.

E201.—Major British Writers I. Required of Sophomores. A study of major works by Chaucer, Spenser, Bacon, Shakespeare, Donne, Milton. Three hours a week, first semester.

Three semester hours.

E202.—Major British Writers II. Required of Sophomores. A study of major works by Dryden, Pope, Swift, Johnson, Boswell, Wordsworth, Keats, Browning, Arnold, Shaw, Yeats, and Eliot. Three hours a week, second semester.

Three semester hours.

E203.—Masterpieces of Western Literature I. Readings and discussion of selected masterpieces of western literature from Antiquity through the Renaissance. Three hours a week, first semester.

Three semester hours.

E204.—Masterpieces of Western Literature II. A continuation of E203 involving the study of masterpieces of western literature from the Enlightenment through the twentieth century. Three hours a week, second semester.

Three semester hours.

E301.—Shakespeare I. The tragedies. Three hours a week, first semester.

Three semester hours.

E302.—Shakespeare II. The comedies and historical plays. Three hours a week, second semester. Three semester hours.

E303.—The Romantic Movement. A study of the poetry of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats. Three hours a week, first semester.

Three semester hours.

E304.—Five Poets. A study of the poetic achievement of five major poets. In 1964-65 the poets studied will be Donne, Browning, Hopkins, Dickinson, and Eliot. Three hours a week, second semester.

Three semester hours.

E305.—Nineteenth Century Prose I. A study of the novels of Austen, Scott, and Dickens, and the major works of Carlyle, Macaulay, and Mill. Three hours a week, first semester.

Three semester hours.

- E306.—Nineteenth Century Prose II. A study of the novels of Thackeray, George Eliot, Meredith, and Hardy, and the major prose works of Newman, Arnold, Ruskin, Morris, and Pater. Three hours a week, second semester.

 Three semester hours.
- E307.—Modern Drama I. A study of major modern dramatists and their work, starting with Ibsen. Three hours a week, first semester.

Three semester hours.

- E308.—Modern Drama II. A continuation of E307, with primary stress on more recent dramatists and trends in drama. E308 may be taken by students who have not taken E307, although E307 offers desirable preparation. Three hours a week, second semester. Three semester hours.
- E309.—Chaucer. The Book of the Duchess, The House of Fame, The Parliament of Fowls, Troilus and Criseyde (in part), The Canterbury Tales (in part). Three hours a week, second semester.

Three semester hours.

- **E310.**—Milton. Horton poems: Areopagitica and other prose works; sonnets; Paradise Lost, Paradise Regained, Samson Agonistes. Three hours a week. (Not offered 1964-65.)

 Three semester hours.
- E311.—English Literature, 1660-1749. The major writers of the Restoration and Augustan periods, exclusive of Milton. Primary attention is paid to Dryden, Pope, and Swift. Three hours a week. (Not offered 1964-65.)
- E321.—Literature for Children. Required of Juniors in the kinder-garten-primary and elementary curricula. The aims of the course are to acquaint the students with the field of children's literature and to provide them with a standard of judgment for the evaluation of children's books. Two hours a week, either semester.

 Two semester hours.
- E322.—Advanced Writing. A course for students interested in doing considerable advanced expository and creative writing. The course includes reading in contemporary and classical works. Three hours a week, either semester.

 Three semester hours.
- E331.—American Literature I. Required of English majors in the Junior class. A study of American literature from Emerson to Whitman. Three hours a week, first semester.

 Three semester hours.
- **E332.**—American Literature II. A continuation of E331. A study of American literature from Mark Twain to Eliot. Three hours a week, second semester.

 Three semester hours.
- **E402.—The Age of Johnson.** A study of major works of English literature written during the second half of the eighteenth century. Three hours a week, second semester.

 Three semester hours.

- E403.—Emerson, Thoreau, and Transcendentalism. A study of Emerson and Thoreau, their ideas and literary techniques. In a broader sense, the course undertakes a study of the social and intellectual movements of the first half of the nineteenth century. Three hours a week, second semester.

 Three semester hours.
- E404.—Victorian Poetry. A study of the poetry of Tennyson, Browning, Arnold, the Rossettis, Morris, Swinburne, Meredith, Hardy and Hopkins. Three hours a week, second semester. Three semester hours.
- E406.—The Modern Novel. The course includes an analysis of the novel as an art form, a survey of the novel in English and American literature, and the reading of ten notable modern novels. Three hours a week, either semester.

 Three semester hours.
- E408.—Hawthorne, Melville, and James. A course of reading and discussion of the major works of these writers. Three hours a week, second semester.

 Three semester hours.
- E410.—English Drama, Exclusive of Shakespeare, 1580-1642. A reading of major dramas of the Elizabethan and Jacobean periods. Three hours a week, second semester.

 Three semester hours.
- E421.—Major American Writers. Required of Seniors not majoring in English. A study of major figures in American literature. Three hours a week or its equivalent, either semester. Three semester hours.
- E433.—The Structure of the English Language. A course in the grammatical, morphological, and syntactical structure of the English language. This course is required of English majors as a prerequisite for their student teaching. Three hours a week, one semester.
- Three semester hours. E434.—The History of the English Language. A course in the historical development of the English language. Illustrative readings from its various periods. This course is required of English majors in the non-teaching curriculum; elective for others. Three hours a week, first semester.

 Three semester hours.
- E501.—Contemporary British and American Literature I. Required of graduate students majoring in English. A study of the contributions of present day writers in prose fiction and biography. Three hours a week, first semester.

 Three semester hours.
- E502.—Contemporary British and American Literature II. Required of graduate students majoring in English. A study of the contributions of present day writers in drama and poetry. Four hours a week, third quarter.

 Two semester hours.
- E521.—Children's Literature. Required of graduate students in the elementary curriculum. Two hours a week, first semester.

Two semester hours.

FOREIGN LANGUAGES

The Department of Foreign Languages offers courses in French, German, Russian and Spanish. Students may major or minor in French and Spanish, or may elect courses to satisfy the foreign language requirement for the A.B. degree or for general cultural purposes.

Foreign Language Requirement for the A.B. degree:

The requirement in foreign languages for the A.B. degree may be met in one of the following ways:

- 1. Successful completion of any foreign language beyond the intermediate level—six semester hours;
- 2. Successful completion of any foreign language at the elementary level **plus** the **same** language at the intermediate level—**twelve** semester hours.

Requirements for Majors:

Majors shall complete at least 24 semester hours in the major language. For the major in French these shall include Survey of French Literature, French Composition and Conversation, and Spoken French. For the major in Spanish, these shall include Survey of Spanish Literature, Spanish Composition and Conversation, and Spoken Spanish. Majors are encouraged to meet minimum requirements in a second foreign language.

FRENCH

F121-122.—Intermediate French. Elective for Freshmen. The course includes constant practice in hearing and speaking French, a review of grammar, written summaries of readings and simple original compositions. Language laboratory. Prerequisite: Two years of high school French.

Three semester hours per semester.

F131-132.—Advanced French. Elective for Freshmen and Sophomores. The course includes constant aural and oral practice; correction of individual pronunciation difficulties; intensive readings in French literature; supplementary readings with written summaries in French. Language laboratory. Prerequisite: Three or more years of high school French or F121-122.

Three semester hours per semester.

F211-212.—Survey of French Literature. Elective for Sophomores and required of majors in French. Representative readings in French literature from the Middle Ages to the present. Lectures, discussions, readings and reports. Conducted in French. Prerequisite: F131-132.

Three semester hours per semester.

F311-312.—French Composition and Conversation. Elective for Juniors and required of majors in French. Advanced exercises in written and spoken French. Translation of literary passages to and from French. Original compositions and oral reports. Language laboratory. Prerequisite: F-131-132.

Three semester hours per semester.

F321.—French Literature of the Seventeenth Century. Elective for Juniors and Seniors. The course includes a study of the classical period with special emphasis given to the theater. Lectures, discussions, readings, and reports. Conducted in French. Prerequisite: F211-212. (Offered in 1965-66 and in alternate years.)

Three semester hours.

F322.—French Literature of the Eighteenth Century. Elective for Juniors and Seniors. The course includes a study of the Age of Enlightment. Lectures, discussion, readings, and reports. Conducted in French. Prerequisite: F211-212. (Offered in 1964-65 and in alternate years.)

Three semester hours.

F331.—French Literature of the Nineteenth Century. Elective for Juniors and Seniors. The course includes a study of the romantic movement with emphasis on lyric poetry and drama and of the realistic movement with emphasis on the novel. Lectures, discussions, readings, and reports. Conducted in French. Prerequisite: F211-212. (Offered in 1965-66 and in alternate years.)

F332.—French Literature of the Twentieth Century. Elective for Juniors and Seniors. The course includes a study of the novel, drama, and lyric poetry of the contemporary period. Lectures, discussions, readings, and reports. Conducted in French. Prerequisite: F211-212. (Offered in 1964-65 and in alternate years.)

F422.—French Civilization. Elective for Juniors and Seniors. The course includes the necessary background in history, geography, social institutions, and culture for the advanced student of French. Conducted in French. Prerequisite: F131-132. (Offered in 1965-66 and in alternate years.)

F424.—Spoken French. Elective for Seniors and required of majors in French. The course includes discussion and oral reports in French on topics of cultural significance and general interest. Prerequisite: F311-312. (Offered 1965-66.)

F510.—Seminar in French. Special topics in literary research.

Three semester hours.

GERMAN

Ger111-112.—Elementary German. Elective for Freshmen. The course aims to develop aural and oral skill by constant practice in the use of the language and covers the elements of grammar and pronunciation. Readings in German. Language laboratory.

Three semester hours per semester.

Ger121-122.—Intermediate German. Elective for Freshmen and Sophomores. The course includes constant practice in hearing and speaking

German, a review of grammar, written summaries of readings, and simple original compositions in German. Language laboratory. Prerequisite: Two years of high school German or Gerl11-112.

Three semester hours per semester.

RUSSIAN

R111-112.—Elementary Russian. Elective for Freshmen. The course aims to develop aural and oral skill by constant practice in the use of the language and covers the elements of Russian grammar and pronunciation. Readings in Russian. Language laboratory.

Three semester hours per semester.

R121-122.—Intermediate Russian. Elective for Freshmen and Sophomores. The course includes constant practice in hearing and speaking Russian, a review of grammar, written summaries of readings, and simple original compositions. Language laboratory. Prerequisite: Two years of high school Russian or R111-112.

Three semester hours per semester.

SPANISH

Sp111-112.—Elementary Spanish. Elective for Freshmen. The course aims to develop aural and oral skill by constant practice in the use of the language and covers the elements of Spanish grammar and pronunciation. Readings in Spanish. Language laboratory.

Three semester hours per semester.

Sp121-122.—**Intermediate Spanish.** Elective for Freshmen and Sophomores. The course includes constant practice in hearing and speaking Spanish, a review of grammar, written summaries of readings, and simple original compositions. Language laboratory. Prerequisite: Two years of high school Spanish or Sp111-112.

Three semester hours per semester.

Sp131-132.—Advanced Spanish. Elective for Freshmen and Sophomores. The course includes constant aural and oral practice, the correction of individual pronunciation difficulties, intensive readings in Spanish literature, supplementary readings and written summaries in Spanish. Language laboratory. Prerequisite: Three or more years of high school Spanish or Sp121-122.

Three semester hours per semester.

Sp211-212.—Survey of Spanish Literature. Elective for Sophomores and required of majors in Spanish. Representative readings in Spanish literature from the Middle Ages to the present. Lectures, discussions, readings, and reports. Conducted in Spanish. Prerequisite: Sp131-132.

Three semester hours per semester.

Sp311-312.—Spanish Composition and Conversation. Elective for Juniors and required of majors in Spanish. Advanced exercises in written

and spoken Spanish. Translation of literary passages to and from Spanish. Original compositions and oral reports. Language laboratory. Prerequisite: Sp131-132. Three semester hours per semester.

Sp321.—Spanish Drama of the Golden Age. Elective for Juniors and Seniors. Study of the precursors as well as the principal authors of the Spanish Golden Age drama. Lectures, discussions, readings, and reports. Conducted in Spanish. Prerequisite: Sp211-212. (Offered in 1964-65 and in alternate years.)

Sp322.—Spanish Prose of the Golden Age. Elective for Juniors and Seniors. Study of the short story and novel with special emphasis on the *Quijote*. Lectures, discussions, readings, and reports. Conducted in Spanish. Prerequisite: Sp211-212. (Offered in 1965-66 and in alternate years.)

Three semester hours.

Sp331.—Spanish Literature of the Nineteenth Century. Elective for Juniors and Seniors. Study of the Romantic Movement and the beginning of the Realist Movement. Lectures, readings, discussions, and reports. Conducted in Spanish. Prerequisite: Sp211-212. (Offered in 1965-66 and in alternate years.)

Sp332.—Spanish Literature of the Twentieth Century. Elective for Juniors and Seniors. The novel, drama, and lyric poetry from 1898 to the present. Lectures, readings, discussions, and reports. Conducted in Spanish. Prerequisite: Sp211-212. (Offered in 1964-65 and in alternate years.)

Three semester hours.

Sp422.—Hispanic Civilization. Elective for Juniors and Seniors. The course includes the necessary background in history, geography, social institutions, and culture for the advanced student of Spanish. Conducted in Spanish. Prerequisite: Sp131-132.

Three semester hours.

Sp424.—Spoken Spanish. Elective for Seniors and required of majors in Spanish. The course includes discussion and oral reports in Spanish on topics of cultural significance and general interest. Prerequisite: Sp311-312.

Three semester hours.

Sp510.—Seminar in Spanish. Special topics in literary research.

Three semester hours.

GEOGRAPHY

The discipline of geography is an academic construct to bridge the natural sciences and the social sciences. The causal development of the physical environment and area distribution of climate, vegetation, land forms, and natural resources is correlated with the cultural features of the landscape as instituted by man. Thus, the interrelationships that exist between man and his environment are the basic understandings which result from a study of geography.

Geography majors are required to fulfill the following minimum requirements: GL101 Physical Geology, GL102 Historical Geology, G301 Principles of Physical Geography, G302 Principles of Human Geography and G404 Seminar, Problems in Regional Geography plus three additional courses in geography selected from the department offerings. Course elections will be made with the guidance of the department chairman.

A minor in geography necessitates completion of the following courses: GL101 Physical Geology, G301 Principles of Physical Geography, G302 Principles of Human Geography, G404 Seminar, Problems in Regional Geography, plus two additional courses in geography selected from the department offerings. Course election will be made with the guidance of the department chairman.

An adequate academic background for the teaching of earth science courses at the secondary school level may be obtained by supplementing the required courses in the natural sciences with the following electives: GL101 Physical Geology, GL102 Historical Geology, GL201 Oceanography, G301 Principles of Physical Geography and G406 Weather and Climate.

G301.—Principles of Physical Geography. Required of Juniors in Elementary and Kindergarten-Primary Education. Also required of History majors in secondary education. The purpose of this course is to develop an awareness, understanding and appreciation of the elements of man's natural environment. The study includes such physical factors as location, weather and climate, ocean currents, land forms, and natural resources of the earth. The utilization of the tools of geography will be stressed throughout the course. First semester.

Three semester hours.

G302.—Principles of Human Geography. Required of Juniors in Elementary and Kindergarten-Primary programs. Also required of History majors in secondary education. The purpose of this course is to develop an understanding of the relationship that exists between the natural and the cultural environment and the resultant effect upon man's activities. The study includes such cultural elements as population distribution, occupational activities, natural resource utilization and man's extraterritorial relations. Second semester.

G303.—Regional Geography of Anglo-America. This course is a regional study of the physical, cultural, political, and economic environment of the peoples of Anglo-America. The study will stress relationships that exist between these regions and other important world areas. First semester.

Three semester hours.

G304.—Regional Geography of Latin America. A regional study of Middle America and South America. Emphasis is upon the physical environment and the cultural, economic, and political conditions that exist and are in the process of development. The study will stress the

relationships that exist between regional Latin America and other regions of the world. Second semester.

Three semester hours.

G305.—Regional Geography of Europe. The physical, cultural, political, and economic features of the European subcontinent are described in the first part of this course. Regional similarities and differences and Europe's place in the modern world will be analysed in the latter part. First semester.

Three semester hours.

G401.—Political Geography. Emphasis is upon the influence of the geographical factors—physical and cultural—upon the development of states and their external relations. The geographic basis of power, internal and international tensions, and major writings in the field will be considered. Three hours a week, first semester.

Three semester hours.

G402.—World Economic Geography. This course explores the relationships that exist between the physical environment and human activities. The geography of commerce, industry, agriculture, natural resources, and conservation will be presented by utilizing selected regions for study. Second semester.

Three semester hours.

G403.—Urban Geography. This course is a study of the influence of geographic factors on urban location, pattern of settlements, land use patterns, form and function of urban areas, and distribution of economic activities within the urban complex. Problems of suburban growth and development, metropolitan problems and planning will also be discussed. Second semester.

Three semester hours.

G404.—Problems in Regional Geography. This course will stress the classification and evaluation of resource potentials and the analysis of pertinent economic, political, and demographic problems. Emphasis will be placed upon underdeveloped nations and current regional problems. Second semester.

Three semester hours.

G406.—Weather and Climate. The elements of weather, temperature, pressure, and moisture will be studied in detail. Correct usage of weather equipment is involved in the course. After the study of weather, the knowledge is applied to climates of the world. Second semester.

Three semester hours.

G532.—Principles of Economic Geography. Required as a minor of graduate students majoring in history and planning to teach in secondary schools and elective for other graduate students preparing to teach in secondary schools. This course considers the principles of human geography as a basis for the study of the political and economic geography of the United States and selected regions of the world. Four hours a week, third quarter.

Two semester hours.

GEOLOGY

GL102.—Physical Geology. This course will cover the physical aspects of geology. The origin of our landforms, weathering processes, agents of erosion and deposition, the different types of rocks, and the most common minerals will be covered. Topographic maps and geologic maps will be used extensively. First semester.

Three semester hours.

GL102.—**Historical Geology.** In this study of historical geology, the major geological periods will be covered in detail. Emphasis will be placed upon North American phyla. Various theories concerning evolution, the origin of man, and an introduction to appropriate fossils will be highlights of the course. Second semester.

Three semester hours.

GL201.—Oceanography. All areas dealing with the sea will be discussed in this course. The origin, tides, waves, flora and fauna, currents, geological classification of coastlines, and the historical exploration and investigation will be studied. First semester.

Three semester hours.

HISTORY AND POLITICAL SCIENCE

The Department of History and Political Science offers programs of major concentration for Secondary Education and for the A.B. and B.S. degrees. Minor programs are offered both in History and in Political Science. History majors, candidates for the B.S.Ed., should elect G301—Physical Geography, and G302—Human Geography. Candidates for the A.B. should elect the introductory courses in Economics. Areas of concentration are offered both in American and European History. ALL major programs should be planned in consultation with the Department Chairman.

HISTORY

H101.—Western Civilization I. Required of Freshmen. After a brief introduction to the Graeco-Roman Heritage, a more intensive survey of Western Culture will commence with the fall of Rome. Special emphasis will be placed upon the cultural, economic, and political forces in the early growth of our civilization during the Middle Ages, the Renaissance and Reformation, the rise of the National States. This course will terminate at 1715. Three hours a week, first semester.

Three semester hours.

H102.—Western Civilization II. Required of Freshmen. This course will stress the following major movements of the modern age: the enlightenment, the causes and course of the French Revolution, the "old" and "new" imperialism, the Age of Reaction, the industrial revolution, the ideological forces of the nineteenth and twentieth centuries, and the impact they made on Western Culture. Three hours a week, second semester.

Three semester hours.

H201.—American History to 1877. Required of Sophomores. This course is an interpretation of American History from 1763 to 1877, and an analysis of American political customs and institutions with emphasis on the Federal and Massachusetts constitutions. Three hours a week, first semester.

Three semester hours.

H202.—American History from 1877. Required of Sophomores. A study of political, economic, and social changes from 1877 to the present with special attention given to the rise of the United States as a world power. Three hours a week, second semester. Three semester hours.

H203.—History of England to 1689. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H101 and H102. A survey in English history from the Roman occupation to the Glorious Revolution of 1689. Special emphasis will be placed on the fusion of Saxon and Norman cultures, the growth of common law, the effects of the Reformation and the emergence of Parliament. Three hours a week, first semester.

Three semester hours.

H204.—History of England from 1689. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H101 and H102. A continuation of H203. This course will stress the evolution of the British system of Cabinet government, the rise of the British Empire, the influence of English thought on America, and the rise of Great Britain as a modern state. Three hours a week, second semester.

H205.—History of Latin America to 1825. Elective for Sophomores (with the consent of the instructor), Juniors, and Seniors. Prerequisites: H101 and H102. A study of the aboriginal American, European background, colonization, and the economic and cultural development of the Latin American colonies to 1825. Three hours a week, first semester.

Three semester hours.

H206.—History of Latin America Since 1825. Elective for Sophomores (with the consent of the instructor), Juniors, and Seniors. The development of the Latin American Republics and their changing roles in inter-American and world affairs. Three hours a week, second semester.

Three semester hours.

H207.—American Colonial History. Elective for Sophomores, Juniors, and Seniors. A study of the interrelationships between Europe and British North America from Columbus to 1763, plus the development of American institutions. Three hours a week, first semester.

Three semester hours.

H208.—American Revolution and Constitution. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H201. A continuation of American Colonial history studying the achievement of independence and creation of stable government in the United States from 1763 to 1800. Three hours a week, second semester. Three semester hours.

H209.—Medieval Europe. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H101. A study of European Civilization from the fall of Rome to the Renaissance. Social, economic, and religio-political institutions to be stressed, with particular emphasis on the role played by the Church, the rise of Medieval thought, and the growth of National States. Three hours a week, first semester. Three semester hours.

H210.—The Renaissance and the Reformation. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H101. This course will first discuss the causes of the Renaissance, its political background, its literary, artistic, and scientific phases; then there will be an examination of the Reformation taking into account the religious changes in various countries, the counter changes of Catholicism, and the heritage of the Reformation. Three hours a week, second semester.

Three semester hours.

H211.—The Eighteenth Century and the French Revolution. Elective for Sophomores, Juniors, and Seniors. Prerequisite: H102. After an introduction to the main forces of the Eighteenth Century, an intensive study of the causality, the influence of ideologies, and the events and legacies of the French Revolution and the Napoleonic Era will be made. Three hours a week, either semester.

Three semester hours.

H301.—Europe in the Nineteenth Century. An elective for Sophomores, Juniors, and Seniors. Prerequisite: H102. After an introduction to the main forces underlying this century, the various national histories will be discussed. Special attention to be given to economic, social, and cultural factors. Three hours a week, first semester. Three semester hours.

H302.—Europe in the Twentieth Century. An elective for Sophomores, Juniors, and Seniors. Prerequisite: H102. A study of the political, social, economic, and cultural aspects of life in Europe in the Twentieth Century. The causes, course, and results of the two World Wars, Fascist Spain, Italian and Nazi Fascism, revolutionary Russia, and the Atlantic democracies will be stressed. Three hours a week, second semester.

Three semester hours.

H303.—The United States in the Twentieth Century. Elective for Juniors, and Seniors. Prerequisite: H202. A study of the major political, social, and economic developments in America from 1900 to the present. Among the topics which will be considered are: the Emergence of the United States as a World Power; the Progressive Era; the First World War and Versailles; the Prosperous Twenties; the Great Depression; the New Deal; and World War II and its aftermath. Three hours a week, either semester.

H305.—History of Early Russia. An elective for Juniors, and Seniors. Prerequisite: H102. A study of Russia history with particular stress on the Kievan Period, the Mongolian Occupation, the Appanage Age, the

Muscovite Regime, and the rise of the Romanov and Imperial Czars. Cultural and political, as well as economic, social, and religious developments to be emphasized. Three hours a week, first semester.

Three semester hours.

H306.—History of Modern Russia. Elective for Juniors, and Seniors. Prerequisite: H301 or History of Ancient Russia. An intensive study will be made of the rise of Russia as a world power from the time of Nicholas I to the present. Cultural, intellectual, and economic changes will be emphasized—and life in the Soviet Union will be examined. Three hours a week, second semester.

Three semester hours.

H307.—History of Greece. Elective for Freshmen, Sophomores, and Juniors. This course covers the history of Greece from the twelfth century B.C. to the Roman occupation. Three hours a week, first semester.

Three semester hours.

H308.—History of Rome. An elective for Freshmen, Sophomores, and Juniors. This course covers the history of Rome from the 5th century B.C. to its fall in A.D. 476. Three hours a week, second semester.

Three semester hours.

H405.—Social and Cultural History of the United States I. to 1870. An elective for Juniors and Seniors. Prerequisite: H201 and H202. A study of the development of American social institutions with particular emphasis on the impact of Puritanism, the Enlightenment, Individualism, and Transcendentalism on the American scene. Three hours a week, first semester.

Three semester hours.

H406.—Social and Cultural History of the United States II. 1870 to the Present. An elective for Juniors and Seniors. Prerequisite: H201 and H202. A study of the transition of the United States from a rural, agrarian society to an urban industrialized society and its impact on the social, cultural, and intellectual life of the people. Three hours a week, second semester.

H407.—The Contemporary Far East. Elective for Juniors and Seniors. Prerequisite: H301 or H302. A detailed analysis of the development of Modern India, China, and Japan. Cultural, especially intellectual and religious forces, will be brought out, as well as the rising power of this area in the Twentieth Century. Southeast Asia will be treated. Three hours a week, either semester.

H501.—Diplomatic History of the United States I. Required of graduate students majoring in history. Undergraduates admitted with permission of the Department Chairman. A study of the main forces that have shaped the early development of American foreign policy from 1777 to 1898. Three hours a week, first semester.

Three semester hours.

H502.—Diplomatic History of the United States II. Required of graduate students majoring in History. Opened only to those who took H501 in the undergraduate division (these will receive three semester hours credit and attend classes throughout the fourth quarter). A study of American foreign relations during the Twentieth Century. Graduates will cover the period 1898-1945. Four hours a week, third quarter.

Two or three semester hours.

H531.—History of England from 1485. Required of graduate students majoring in English. A survey course in English History starting with the Tudor Renaissance. Special emphasis will be placed on English political and social history as it applies to English literature. Four hours a week, third quarter.

Two semester hours.

ECONOMICS

Ec301.—Principles of Economics. An elective for Sophomores and Juniors. This introductory course will analyze the basic principles and practices of contemporary capitalism in the United States, such as business and labor organization, supply and demand, personal finance, and Government influences, including the survey of central economic ideas since Adam Smith. Three hours a week, first semester.

Three semester hours.

Ec302.—Advanced Principles of Economics. An elective for Sophomores and Juniors. Prerequisite: Ec201. This course proceeds to a study of money and banking, business cycles, monetary and fiscal policies, international trade and finance, and such current economic problems as growth, affluence and stability. Three hours a week, second semester.

Three semester hours.

Ec401.—Comparative Economics. An elective for Juniors and Seniors. Prerequisites: A course in elementary economics. The theory, structure, practice and problems of major foreign economic systems will be analyzed and compared, with emphasis on Great Britain, the USSR, and the under-developed nations and on their differing answers to the basic economic questions. Three hours a week, either semester.

Three semester hours.

POLITICAL SCIENCE

Gov101.—American Government. Elective for Freshmen. An analysis of the structure and operation of the government of the United States. This course includes a study of the Constitution; the functioning of the executive, legislative, and judicial branches; the role of political parties; and the significance of the democratic heritage. Three hours a week, first semester.

Gov102.—Comparative Government. Elective for Freshmen (others admitted with special permission). A comparative study of the governments of Great Britain, Italy, France, Germany, and Soviet Russia. The

structure and operation of each of these governments will be analyzed in the light of its historical background. Three hours a week, second semester.

Three semester hours.

Gov201.—Political Theory I. Elective for Sophomores and Juniors. A close scrutiny of the major political doctrines exposed from Plato down to the Age of Enlightenment will be explored. The development of political thought in a cultural context will be explored emphasizing the beliefs of: Plato, Aristotle, Cicero, St. Augustine, St. Thomas Aquinas, Machiavelli, Hobbes, Locke, and Rousseau. Three hours a week, first semester.

Gov202.—Political Theory II. Elective for Sophomores and Juniors. Prerequisite: Political Theory I or a course in American Government. A continuation of Political Theory I. Continues the analysis of political thought from the era of the American Revolution to modern times. Special attention to be given to the political thinking of the Founding Fathers, and to the institutionalizing of political, liberal, and civil beliefs. Three hours a week, second semester.

Gov301.—International Relations. Elective for Juniors and Seniors. An introduction to the elements of national power, and the principles of international affairs applied to events in Asia, Europe, and North America. The period after World War II will be given special attention. Three hours a week, either semester.

Three semester hours.

Gov302.—Massachusetts Government. An elective for Juniors and Seniors. A study of the state constitution and of the executive, legislative and judicial departments as to history, organization, powers and services. Also a study of county, municipal and town governments in Massachusetts. Second semester.

Three semester hours.

Gov303.—American Constitutional Problems and Law. Prerequisite: a course in American Government. This course dwells upon constitutional problems arising from federalism and separation of powers. Special emphasis placed on the extension of federal power through decisions of the Supreme Court. The Case Law approach to be employed. Recommended for pre-law students. Three hours a week, first semester.

Three semester hours.

Gov304.—Political Parties, Public Opinion, and Propaganda. Prerequisite: Gov101. An elective for Juniors and Seniors. This course includes a study of the organization and influence of political parties on national politics, the pressure groups and means of channeling public opinion, and the effectiveness of propaganda in the political process, with particular stress on the Democratic state. Three hours a week, second semester.

Three semester hours.

Gov401.—Education for Citizenship. Elective for Seniors. A course designed to enable teachers to educate for democracy with a clearer, stronger purpose. The course will suggest teaching materials and methods, student activities, and administrative and supervisory procedures which are directed toward more adequate preparation of students for the duties of citizenship. Effective school and community practices for increasing observance of law, intergroup good will, and political interest and intelligence will be stressed. Three hours a week, one semester.

SOCIOLOGY

Soc401.—Sociology. Elective for Sophomores, Juniors, and Seniors. This course is a study of social relationship in a democracy. It deals with such topics as the following: (1) factors in the social life of man; (2) the role and growth of culture; (3) the geographical environment; (4) group life; (5) crowds, publics, and social classes; (6) cooperation, competition, conflict, accommodation, and assimilation; (7) economic institutions; (8) interrelationship of institutions; (9) problems of social disorganization. Three hours a week, either semester.

Soc402—Contemporary Social Problems. Elective for Sophomores, Juniors, and Seniors. Prerequisite: Soc401. Application of sociological principles to the analysis of major problems in contemporary society: problems caused by the decline of family influence, the mass media, crime and delinquency, the role of government, and the changing occupational structure. Three hours a week, second semester.

Three semester hours.

MATHEMATICS

The Department of Mathematics offers programs of study leading to the degrees A.B., B.S., A.B. in Education, B.S. in Secondary Education, and M.Ed. The training offered contributes to the preparation of students for a wide variety of careers including the profession of secondary-school mathematics teaching, actuarial mathematics, creative scientific research and industrial technology.

The Major in Mathematics. To be accepted for concentration in mathematics, a student after having completed Mathematics 107, 108, 207, and 208 (and M407 and M406 for B.S. mathematics candidates) must have his program for his Junior and Senior years approved by the Mathematics Department at the end of his sophomore year. No student with a grade of less than 2 in M201 or M202 may concentrate in mathematics. Entering students who plan ultimately to undertake graduate study in mathematics should satisfy the language requirement for the A.B. degrees by taking French, German, or Russian. Candidates for the A.B. or B.S. degrees (non-teaching) must complete beyond general education at least 18 semester hours in a minor field.

Prospective actuarial candidates for the life insurance industry are

advised to take the following courses: M303, M304, M402, M403, M404, and M405.

For detailed information on course sequences for the mathematics major and related minor for the various degrees, consult the Mathematics Department Chairman.

Minors in mathematics shall complete at least 18 semester hours in mathematics which must include M107, M108, M207, and M208.

M101.—Fundamental Principles of Mathematics I. Required of Freshmen in the A.B. program who are not majors in mathematics or science. Prerequisite: none. The course shows what mathematics is, its range, development, and approach to real problems with emphasis placed upon the fundamental concepts and applications of mathematics rather than its formal techniques. Topics included are: a historical development, mathematical reasoning, numbers, algebra, Euclidean, projective and coordinate geometry and applications to science. Three hours a week, first semester.

M102.—Fundamental Principles of Mathematics II. Elective for Freshmen. Prerequisite: none. The course includes the differential and integral calculus, deductive reasoning, trigonometry, non-Euclidean geometry, algebras, statistics and probability. Three hours a week, second semester.

Three semester hours.

M103.—An Introduction to Modern Mathematics I. Elective for Freshmen who have not had four years of high school mathematics. The course stresses the nature of mathematics as a logical system and a modern, unified treatment of algebra, trigonometry, analytic geometry, and an introduction to calculus. Topics included are sets, algebra, inequalities, functions and determinants. Three hours a week, first semester.

Three semester hours.

M104.—An Introduction to Modern Mathematics II. Elective for Freshmen. Prerequisite: M103. The course includes functions, limits, continuity, derivatives, applications, conic sections, and integration. Three hours a week, second semester.

Three semester hours.

M107.—Calculus Ia. Elective for Freshmen who have had four years of high school mathematics and for Sophomores who have passed M104. The course includes the rate of change of a function, derivatives of algebraic functions, applications of the derivatives and integration. Four hours a week, first semester.

Four semester hours.

M108.—Calculus Ib. Elective for Freshmen and Sophomores. Prerequisite: M107. The course includes application of the definite integral, transcendental functions, methods of integration, determinants and linear equations. Four hours a week, second semester. Four semester hours.

M201.—Calculus IIa. Elective for students who have passed M106. The course includes methods of integration, determinants, and linear equations, and plane analytic geometry. Three hours a week, first semester.

Three semester hours.

M202.—Calculus IIb. Elective for students who have passed M201. The course includes hyperbolic functions, polar coordinates, vectors and parametric equations, and solid geometry and vectors. Three hours a week, second semester.

Three semester hours.

M207.—Calculus IIa. Elective for Sophomores and Juniors. Prerequisite: M108. The course includes plane analytic geometry, hyperbolic functions, polar coordinates, vectors and parametric equations, and solid geometry and vectors. Four hours a week, first semester. (Not offered 1964-65).

M208.—Calculus IIb. Elective for Sophomores and Juniors. Prerequisite: M207. The course includes partial differentiation, multiple integrals, infinite series, and complex numbers and functions. Four hours a week, second semester. (Not offered 1964-65.) Four semester hours.

M301.—Calculus IIIa. Elective for students who have passed M202. The course includes partial differentiation and multiple integrals. Three hours a week, first semester.

Three semester hours.

M302.—Calculus IIIb. Elective for students who have passed M301. The course includes infinite series, complex numbers and functions, and differential equations. Three hours a week, second semester.

Three semester hours.

M303.—Finite Mathematics. Elective for Juniors. Prerequisite: M108. The course includes elements of mathematical logic, probability theory, stochastic processes, binomial and normal distribution, vectors and matrices, linear programming, finite differences and processes, and applications. Three hours a week, first semester. (Not offered 1964-65.)

Three semester hours.

M304.—Calculus of Finite Differences. Elective for Juniors and Seniors. Prerequisite: M208. The course includes symbolic operators, leading central and divided differences, interpolation, inverse interpolation, summation, difference equations and finite integration. Three hours a week, second semester.

Three semester hours.

M305.—Basic Modern Mathematics. Required of Juniors who elect Elementary and Kindergarten-Primary Curricula. Elective for Seniors in Secondary Curriculum who are not majoring in Mathematics or Science. The course presents the fundamental ideas and applications of mathematics. Topics included are numerals, number systems, sets, properties of operations, informal geometry, fractions, percent, open sentences and applied trigonometry. Three hours a week, first semester.

Three semester hours.

M306.—Fundamental Concepts of Geometry I. Elective for Juniors. Prerequisite: M108. The course shows the historical evolution of our geometrical concepts, the relationship between Euclidean plane geometry and other geometries, the nature of proof, and the concept of a geometry as a logical system. Three hours a week, first semester.

Three semester hours. M307.—Probability. Elective for Juniors and Seniors. Prerequisite: M208. The course includes properties of the probability set function, conditional probability, independence, stochastic processes, distributions and expectations of random variables, and limiting distributions. Three hours a week, second semester.

Three semester hours.

M308.—Fundamental Concepts of Geometry II. Elective for Juniors and Seniors. Prerequisite: M306. The course covers non-Euclidean geometrics, the Erlanger Program, basic topological concepts, n-dimensional geometry, and abstract spaces. Three hours a week, second semester.

Three semester hours. M309.—History of Mathematics. Required of Juniors majoring in Mathematics in the Secondary Curriculum. The course surveys the history of elementary mathematics, through calculus, from ancient times to the present. Emphasis is on the major developments in the fields of arithmetic, algebra, and geometry, and on contributions of noteworthy mathematicians and epochs. An important part of the course is the significance of history in the teaching and learning of mathematics. Three hours a week, second semester.

M316.—Methods of Teaching Mathematics in the Kindergarten-Primary School. Required of Juniors electing the Kindergarten-Primary Curriculum. Prerequisite: M305. This course considers the methods and materials needed by teachers of arithmetic in Grades I through III. Two hours a week, second semester.

Two semester hours.

M326.—Methods of Teaching Mathematics in the Elementary School. Required of Juniors electing the Elementary Curriculum. Prerequisite: M305. This course considers the methods and materials needed by teachers of arithmetic in Grades I through VIII inclusive. Two hours a week, second semester.

Two semester hours.

M335.—Mathematics for Secondary School Teachers. Required of Juniors electing the Secondary Curriculum and majoring in mathematics or science. This course provides backgrounds for teaching both traditional and modern Mathematics. Special attention is given to number systems, basic concepts and applications of mathematical operations, definitions and properties of sets and various uses of the set concept. Three hours a week, first semester.

Three semester hours.

M401.—Mathematical Discovery. Elective for Seniors electing the Secondary Curriculum. The course is concerned with problem solving from

the heuristic point of view and analyzes generally the ways and means of discovery of problem solutions. The aim is an understanding of and improvement in problem solving and the means of teaching problem solving. Three hours a week, second semester. Three semester hours.

M402.—Mathematical Statistics I. Elective for Seniors. Prerequisite: M307. A broad introduction to classical large-sample methods. Topics covered are probability, frequency distributions, sampling theory, hypothesis testing and estimation, correlation and regression. Three hours a week, first semester. (Not offered 1964-65.)

M403.—Mathematical Statistics II. Elective for Seniors. Prerequisite: M402. The course includes limiting distributions, small sample distributions, distribution-free statistical influence, statistical hypotheses, analysis of variance, and multi-variate distributions. Three hours a week, second semester. (Not offered 1964-65.) Three semester hours.

M404.—Mathematics of Finance. Elective for Seniors. The course considers the application of algebra to interest, annuities, bonds, investments and life insurance. Three hours a week, first semester. (Not offered 1964-65.)

Three semester hours.

M405.—Mathematics of Life Insurance. Elective for Seniors. Prerequisite: M404. The course includes mathematical theory of life contingencies, mortality tables, annuities, net premiums, reserves, nonforfeiture benefits, and gross premiums. Three hours a week, second semester. (Not offered 1964-65.)

Three semester hours.

M406.—Modern Algebra. Elective for Sophomores, Juniors and Seniors. Prerequisite: M407 or M408. The course is an introduction to the abstract thinking required in higher mathematics. Topics included are sets, relations, functions, groups, rings, integral domains, fields, and Boolean Algebra. Three hours a week, second semester.

Three semester hours. M407.—Linear Algebra. Elective for Sophomores and Juniors in the A.B. and B.S. programs. The course is concerned with an axiomatic approach of the blending algebraic and geometric concepts. The algebra of matrices and the geometry of linear transformations are developed simultaneously and applications of concrete ideas are provided. Topics included are abstract systems, vector spaces, linear transformations, and matrices. Three hours a week, first semester. (Not offered 1964-65.)

Three semester hours. M408.—Foundations of Mathematics. Required of Juniors majoring in Mathematics in the Secondary Curriculum. A unified approach to the logical structure of Mathematics with emphasis both on postulational foundations and the process of logical reasoning with applications to science and other fields of thought. Three hours a week, second semester.

Three semester hours.

M409.—Differential Equations. Elective for Juniors and Seniors. Prerequisite: M208. The course considers the theory and techniques of solving differential equations. Equations of the first order and first degree, linear differential equations, non-homogeneous equations, and special equations of order two are studied, together with their application to science. Three hours a week, second semester. Three semester hours.

M411.—Analysis. Elective for Seniors. Prerequisite: M208. The course includes fundamental motions of limits, continuity, differentiation and integration, for functions of one or more variables; infinite series, improper integrals, and applications. Three hours a week, first semester. (Not offered 1964-65.)

M501.—Fundamental Concepts of Geometry. Required of Graduate students preparing to teach mathematics in secondary schools. Content varies from year to year, topics selected from showing the historical evolution of our geometrical concepts, the relationship between Euclidean plane geometry and other geometries, the nature of proof, the concept of a geometry as a logical system, the Erlanger Program, basic topological concepts, n-dimensional geometry, and abstract spaces. Three hours a week, first semester.

M504.—Probability and Statistical Inference. Offered as a major or minor for graduate students. A broad introduction to classical large-sample methods. Topics covered are probability, frequency distributions, sampling theory, hypothesis testing and estimation, correlation and regression. The theory and method of teaching probability and statistics in the senior high school. Four hours a week, third quarter.

Two semester hours.

M542.—A Survey of Algebra and Number Theory. Required of Graduate students preparing to teach mathematics in secondary schools. Emphasis will be placed on algebraic structures, nature of proof, formal properties and construction of number systems, and methods of presentation of these topics in a modern mathematics program. Four hours a week, third quarter.

Two semester hours.

MUSIC

The program in Music is offered to prepare men and women to teach music at all levels in the elementary schools, from kindergarten through Grade VI. Two courses are required: Ms201-2, and either Ms411 for those preparing to teach at the Kindergarten-Primary level, or Ms422 for those preparing to teach in the Elementary school.

The Department of Music offers a program of elective courses directed primarily to students who possess a special interest in the field of music. This program aims at developing a broad knowledge of music, its theory and techniques. It also aims at developing vocal skills. There

are no prerequisites.

Ms101.—Music IA. Elective for Freshmen and Sophomores. This course includes: (1) a study of keys, signatures, scales, intervals, triads; (2) ear training; (3) rhythmic and melodic dictation; (4) sight singing; (5) voice training; (6) interpretation; (7) application of the voice to book materials. Three hours a week, first semester.

Three semester hours.

Ms102.—Music IB. Elective for students who have passed Ms101. This course continues the work of Music IA and also includes the study of elementary harmony. Three hours a week, second semester.

Three semester hours.

Ms201.—Appreciation of Music. Required of Sophomores. A general survey of the history and literature of music from the Middle Ages to the Contemporary period. Form, orchestration, and stylistic features are studied in relation to the historical and cultural background of the major works which are heard. Assigned reading. Three hours a week, either semester.

Three semester hours.

Ms203.—Music IIA. Elective for Sophomores. Prerequisite: Ms102. This course continues the work of Ms101 and 102. It includes (1) voice and ear training; (2) sight singing; (3) more advanced dictation; (4) presentation and interpretation of part songs; (5) harmonic analysis; (6) harmony; triads and their inversions, dominant seventh chords, the harmonization of melodies and figured basses. Three hours a week, first semester.

Ms204.—Music IIB. Elective for Sophomores. Prerequisite: Ms203. This course develops further the work of Ms203 and also includes the study of the dominant seventh chord and its inversions, the chords of the seventh upon the leading tone, secondary seventh chords, and modulation. Three hours a week, second semester.

Three semester hours.

Ms301.—Music IIIA. Elective for Juniors. Prerequisites: Ms203 and 204. This course includes (1) theory; (2) sight singing; (3) voice and ear training; (4) rhythmic and melodic dictation; (5) transposition; (6) presentation and interpretation of part songs; (7) harmonic analysis; (8) harmony: modulation, irregular resolutions, and non-harmonic tones, and the harmonization of melodies and figured basses. Three hours a week, first semester.

Ms302.—Music IIIB. Elective for Juniors. Prerequisite: Ms301. The course continues the work of Music IIIA and also includes the study of the chords of the dominant ninth, eleventh, and thirteenth, the Neapolitan sixth and the chords of the augmented sixth. Three hours a week, second semester.

Three semester hours.

Ms402.—Music, IV. Elective for Seniors. Prerequisite: Ms301-302. The course includes (1) voice and ear training; (2) sight singing; (3) presentation and interpretation of part songs; (4) keyboard harmony; (5) writ-

ten harmony—further use of harmonic material applied to the harmonization of folk songs; (6) harmonic analysis. Three hours a week, second semester.

Three semester hours.

Ms411.—Music, Kindergarten-Primary. Required of Seniors who have elected the Kindergarten-Primary Curriculum. The course includes voice and ear training; a study of keys, signatures, scales, intervals, triads; sight singing; methods of teaching music in the kindergarten and primary grades; vocal problems of the child's voice; rote songs; piano playing; a study of materials suitable for use in these grades. Candidates must pass a satisfactory examination in piano playing. Three hours a week, either semester.

Ms422.—Music, Elementary School. Required of Seniors who have elected the Elementary Curriculum. The course includes: (1) a study of keys, signatures, scales, intervals, triads; (2) voice and ear training; (3) sight singing; (4) interpretation; (5) methods of teaching music in the elementary grades; (6) study of materials suitable for use in these grades. Three hours a week, either semester.

PHILOSOPHY

The Department of Philosophy offers both courses in general education and an elective sequence in the field. Students who wish to concentrate in Philosophy should elect Phill01—Problems of Philosophy—in the Freshman year.

Phil101.—Problems of Philosophy. Elective for Freshmen. An introductory course. The aim of this course is to acquaint the student with the philosophic method, the problems and issues of philosophy, and the great philosophers. Three hours a week, first semester.

Three semester hours.

Phil102.—Philosophy of Man. Elective for Freshmen. Man is studied as a rational social being with supremacy of intellect and the anarchy of feeling. Modern images of man and the traditional great philosophies of life will be studied. Three hours a week, second semester.

Three semester hours.

Phil201.—History of Philosophy I. Elective for Sophomores. This course concentrates on selected philosophers from the Pre-Socratics through the Middle Ages. The main questions and answers of our philosophical heritage will be discussed in their cultural milieu indicating the timelessness of philosophical thought. Text readings and selected source readings and discussions will be included. Three hours a week, first semester.

Phil202.—History of Philosophy II. Elective for Sophomores. This course continues Phil201. It begins with the Renaissance—Humanistic

philosophers, continues with the scientific thinkers and the near modern philosophers. The course concludes with philosophers from the contemporary scene. Three hours a week, second semester.

Three semester hours.

Phil301.—Ethics. Elective for Juniors. This course studies the historical development of ethics from the ancient Greek, Roman, Medieval, Modern periods through Positivism, Marxism, Existentialism. Ethics will be studied in its historical and cultural perspectives. Special attention will be given to ethical theories and to the application of ethics for teachers, business, communication. Three hours a week, first semester. (Not offered 1964-65.)

Phil302.—Applied Ethics. Elective for Juniors. Ethics as a philosophical science based on universal laws of human conduct will be studied. Readings and study of selected problems will complete the course. Three hours a week, second semester. (Not offered 1964-65.)

Three semester hours.

Phil303.—Social Philosophy. Elective for Juniors. Study of the different conceptions of man, of values, and of social processes, leading to a systematic philosophy of man and the state. Evaluation of fundamental theories. Three hours a week, first semester. (Not offered 1964-65.)

Three semester hours.

Phil304.—American Philosophy. Elective for Juniors. Development of American philosophy through reading and discussion of representative selections. Three hours a week, second semester. (Not offered 1964-65.)

Three semester hours.

Phil401.—General Philosophy. Required of Seniors. The aim of this course is to acquaint the student with the philosophic method, the problems of philosophy, and the great philosophers. Attention will be given to cosmology, ontology, rational psychology, logic, epistomology, aesthetics, and the various philosophic schools. Three hours a week, either semester.

Three semester hours.

Phil402.—History of Recent Philosophy. Elective for Seniors. This course studies the main lines of modern thought: Logical Positivism, Existentialism, Neorealism, Dialetic Materialism, Pragmatism, Thomism, Transcendentalism, Contemporary and European thought will be studied in their historical and cultural perspectives. Special attention will be given to the twentieth century philosophers—the Age of Analysis. Three hours a week, second semester.

Three semester hours.

Phil403.—Logic. Elective for Juniors and Seniors. This course studies principles of Rhetoric and Logic. Rhetoric aims to discover and reduce to system the rules of persuasion. Logic aims to discover rules of right reasoning which guide the mind to think and reason correctly in its chief operations: Simple Apprehension, Judgment, Reasoning. Special at-

tention is given to Fallacies, Deduction, Induction, and Subjective Factors affecting thinking. Three hours a week, second semester.

Three semester hours. Philosophy of Education. Required of graduate students majoring in Elementary Education. This course is a study of educational thought. It includes an examination of the great documents of educational thought which have influenced present day education. There will be an application of the philosophical bases of education to recurrent and contemporary educational issues and problems. Six hours a week, third quarter.

Three semester hours.

Phil531.—Philosophical Foundations of Education—Part I. Required of graduate students majoring in Secondary Education. This course is an historical approach to the study of educational thought and includes an examination of primary educational concepts which have evolved through western thought to the present day. Selections from the great documents in educational thought are studied in relation to the historical period in which they were produced. The student is expected to read and analyze the original contributions of the major educational philosophers. Three hours a week, first semester.

Phil532.—Philosophical Foundations of Education—Part II. Required of graduate students majoring in Secondary Education. This course makes application of the philosophical bases of education to recurrent and contemporary educational issues and problems. Each topic is studied from the viewpoint of each of the major philosophical systems and the related educational concepts in order to determine to what extent a synthesis of viewpoint may be achieved. Four hours a week, third quarter.

Two semester hours.

PHYSICAL EDUCATION

The departments for men and women are separate. Offerings in general education include Health, Physical Education activities, and Aquatics. The department participates in the teacher training programs, offering PhEd301—Principles of Physical Education for kindergarten and elementary majors and FA301—First Aid for all teacher candidates. Elective work includes courses in recreational leadership, coaching and officiating, and outdoor education (women only).

PhEd101-102M.—Freshman Year Activities. Required of all men students. This course is designed to improve or maintain the physical fitness of the students through vigorous exercise. Emphasis is placed on team games and activities with a "carry-over" value. Instruction is given in softball, tag football, basketball, track, volleyball, badminton, and golf. Two hours a week, throughout the year.

PhEd101-102W.—Freshman Physical Education. Required of all women students. This course stresses educative motor experiences through a

general survey of physical education activities. It is adapted to the varying backgrounds and needs of the students. Two hours a week, throughout the year.

PhEd201M.—Aquatics. Required of all Sophomore men. Non-swimmers are taught the elementary strokes. Swimmers' techniques are improved, and their physical condition strengthened. Emphasis is placed on water safety. Two hours a week, first semester.

PhEd201W.—Aquatics. Required of all Sophomore women. An aquatics course concerned with teaching the skills involved in swimming and diving, according to the standards established by the American National Red Cross. Two hours a week, either semester.

PhEd203W.—Recreation and Leadership. Elective for Sophomore and Junior women. A course designed to acquaint the students with the need for and the values of Recreation in our modern society. The course will equip students with methods and materials used in recreation, and will provide students with opportunities for recreation leadership. Emphasis will be placed on planning the "balanced" recreation program. The course will also acquaint students with opportunities available in the field of recreation. A course specially designed for prospective playground leaders, recreation leaders, and camp counselors. Three hours a week, first semester.

PhEd204W.—Organization and Administration of Community Recreation. Elective for any student who has passed PhEd203W. A course designed to acquaint the students with the historical, philosophical and theoretical background of recreation, play, and leisure. The course will also provide the students with an understanding of the organization and administration of community recreation. In addition, opportunities will be provided for leadership experiences and the planning of community recreation programs. Three hours a week, second semester.

Three semester hours.

PhEd301M.—Physical Education. Required of all Junior men who have elected the Elementary curriculum. This course will include a study of the aims and objectives of physical education at the elementary school level. The students will become acquainted with the methods and materials used in teaching physical education. Two hours a week, either semester.

One semester hour.

PhEd301W.—Physical Education. Required of all Junior women who have elected the Elementary or Kindergarten curriculum. This course is designed to acquaint the student with the aims, objectives, and philosophy of physical education. Emphasis will be placed on the methods and materials used for effective teaching of physical education at the elementary level. An opportunity will be provided for students to gain

practical experience in teaching physical education activities to children at the laboratory school. Two hours a week, either semester.

One semester hour.

PhEd304W.—Principles and Philosophy of Physical Education. Physical education as a developmental experience plays an important role in the American cultural pattern. This course is designed to develop the students' awareness and understanding of the place of physical education in the modern world through the study of the following topics: program administration, curriculum designing, teaching principles, guidance and evaluation techniques, and source materials. Elective for Junior women. Three hours a week, second semester.

Three semester hours.

PhEd401M.—Coaching the Major Sports. Elective for Junior and Senior men. This course is designed to prepare the student to coach athletic teams at the elementary and junior high school level. The rules, strategy, practice techniques, coaching psychology of football, baseball and basketball will be covered. Three hours a week, second semester.

Three semester hours. PhEd401W.—Coaching and Officiating. Elective for Sophomore, Junior, and Senior women. Prerequisite is approval for admission by the

ior, and Senior women. Prerequisite is approval for admission by the Department of Physical Education. This course is designed to acquaint students with the philosophy and standards of girls and women's sports. The techniques of coaching and officiating of the major sports for women will be stressed. Opportunity will be provided for students to become rated officials upon passing the national written and practical examinations. Three hours a week, first semester.

Three semester hours.

PhEd403W.—Workshop in Outdoor Education. Elective for upperclass women. This course will stress the basic information fundamental to understanding the interrelationships that exist between the natural environment and man. The objectives of this course will be accomplished by classroom lectures, field trips, and camp experiences. This course would eminently serve the needs of classroom teachers. Three class hours per week in addition to required field trips and camp experience. Second semester only.

FIRST AID

FA302.—First Aid and Safety. Required of Juniors. This course fulfills the requirements of the Standard and Advanced Red Cross First Aid Courses. It also includes specific instruction for health and safety in the over-all school situation. Two hours a week, either semester.

One semester hour.

HEALTH

H1102.—Personal and Community Health. Required of Freshmen in Education curricula. The course emphasizes knowledge of the physiology of the body. Stress is placed on scientific information and the development of health practices which contribute to effective living. Two hours a week, either semester.

Two semester hours.

PHYSICS AND CHEMISTRY

The department offers majors in physics and chemistry and a major in science for the teacher preparation programs. Courses required of all physics majors are Ph203, Ph204, Ph303, Ph304, Ph305, Ph306, Ph401, and Ph402. Courses required of chemistry majors are Ch101-102, Ch201-202, Ch301-302, and Ch303-304.

PHYSICS

PS101.—Physical Sciences I. This course, required of all Freshmen, who are not majors in science, is designed to acquaint the student with the contributions and the place of science in contemporary civilization. Specifically designed for the student who will not major in science, the course attempts to show what science is and what it purports to do. In this portion of the course, selected topics from physics are studied from the points of view of their historical origin, their development and the influences which they have had on modern society. Lectures, demonstrations, discussions and supplemental readings will be used. Three hours a week, first semester.

PS102.—Physical Sciences II. A continuation of the course Physical Sciences I; in this part of the course selected topics from the fields of chemistry and astronomy are studied with the same points of view in mind as in the preceding course. Three hours a week, second semester.

Three semester hours.

PS103.—Selected Topics in Physics. This course, open to election by Freshmen who have had sufficient background in science in high school and who are not majors in science, is designed to offer a more intensive treatment of selected areas of physics and chemistry. During the first semester, topics will be chosen from the area of physics for detailed study. Students will be expected to demonstrate competency in problem solving and in independent reading. Three hours a week, first semester.

Three semester hours.

PS104.—Selected Topics in Chemistry. A continuation of the previous course, this portion will pursue work in the field of Chemistry. PS103 is a prerequisite. Three hours a week, second semester.

Three semester hours.

Ph201.—College Physics. Elective for students who have the prerequisite in Mathematics. An intensive study will be made of the areas of Mechanics and Heat with emphasis on the experimental background for the topics studied. Mathematics 107-108 is a prerequisite. Three lectures and 2 hours of laboratory per week, first semester.

Four semester hours.

Ph202.—College Physics. During this semester, the areas of Electricity, Light and Sound will be studied. Ph201 is a prerequisite. Three lectures and 2 hours of laboratory per week, second semester.

Four semester hours.

Ph203.—Mechanics. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. Kinematics and dynamics of point masses and rigid bodies generalized coordinates, Lagrange's equations, small oscillations. Prerequisite is Mathematics 107-108. Three lectures and 2 hours of laboratory per week, first semester.

Ph204.—Heat and Thermodynamics. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. First and second laws of thermodynamics, entropy, phase changes and applications to physics and chemistry. Prerequisite is Mathematics 107-108. Three lectures and 2 hours of laboratory per week, second semester.

Four semester hours.

Ph301.—General College Physics. This course is elective for Sophomores and Juniors who are desirous of having a course in physics without the rigor of mathematical treatment in Ph201-202. Selected topics from the areas of Mechanics and Heat will be discussed by means of lectures, demonstrations and laboratory work. Prerequisite is Mathematics 103-104. 2 lectures and 2 hours of laboratory work per week, first semester.

Three semester hours.

Ph302.—General College Physics. A continuation of Ph301, this course includes topics from the areas of Electricity, Light and Sound. Ph301 is a prerequisite. 2 lectures and 2 hours of laboratory work per week, second semester.

Three semester hours.

Ph303.—Electricity and Magnetism. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. Electric forces and fields, potential, dielectric theory, moving charges and fields will be studied. Prerequisite is Mathematics 107-108. Three lectures and 2 hours of laboratory per week, first semester. (Not offered in 1964-65.)

Ph304.—Direct and Alternating Current Theory. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. The nature of electrical charge, production of charge and characteristics of moving charges, Ohm's law, Kirchoff's law and transients will be studied. Prerequisite is Mathematics 107-108. Three lectures and 2 hours of laboratory per week, second semester. (Not offered in 1964-65.)

Ph305.—Geometrical and Physical Optics. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. Nature of light, phenomena of interference, diffraction and polarization, propagation of light through various media will be studied. Prerequisite is Mathematics 107-108. Three lectures per week, first semester. (Not offered in 1964-65.)

Three semester hours.

Ph306.—Acoustics. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. Nature and properties of vibrations as applied to sound, characteristics of transmission through various media will be treated. Prerequisite is Mathematics 107-108. Three lectures per week, second semester. (Not offered in 1964-65.)

Ph401.—Atomic Physics. Required of all students who are candidates for a major in Physics. Elective for students who have the prerequisites. Structure of the atom, atomic spectra, elementary particles, introduction to quantum theory will be studied. Prerequisite is Mathematics 207-208. Three lectures and 2 hours of laboratory work per week, first semester. (Not offered in 1964-65.)

Ph402.—Nuclear Physics. Required of all students who are candidates for a major in Physics. Elective for those students who have the prerequisites. Structure of the nucleus, nature of radiations, relativity theory, isotopic applications will be studied. Prerequisites are Mathematics 207-208 and Ph401. Three lectures and 2 hours of laboratory work per week, second semester. (Not offered in 1964-65.)

Four semester hours.

Ph403.—Electronics. Elective for students who are candidates for a major in Physics. Elective for students who have the prerequisites. Electron tubes and circuits, properties of pulse circuits and transistors will be studied. Prerequisites are Mathematics 301-302 and Ph304. Three lectures and 2 hours of laboratory per week, first semester. (Not offered in 1964-65.)

Ph404.—Spectroscopy. Elective for students who are candidates for a major in Physics. Elective for students who have the prerequisites. Spectra, analysis of atomic and molecular compounds, applications to physics and chemistry will be studied. Prerequisites are Mathematics 301-302 and Ph305. Three lectures and 2 hours of laboratory work per week, first or second semester. (Not offered 1964-65.)

Four semester hours.

Ph405.—Modern Physics. Topics in mechanics, electricity and magnetism, quantum mechanics, relativity theory will be treated from the classical and quantum approach. Four lectures per week, first or second semester. (Not offered 1964-65.)

PS531.—General Science in the Secondary School. Required of graduate students who are majoring in the teaching of science in the junior high school. The subject matter of this course is descriptive astronomy with particular emphasis on the solar system. Lectures, demonstrations and laboratory exercises are given. Three class hours per week, first semester.

Three semester hours.

PS532.—General Science in the Secondary School. Required of graduate students who are majoring in the teaching of science in the junior high school. This course deals with the history and philosophy of science with particular emphasis on the significance of experimentation in the development of scientific thought. Four hours per week, third quarter.

Two semester hours.

CHEMISTRY

Ch101.—Inorganic Chemistry. Structure of matter, periodicity, states of matter, compound formation, properties of solutions will be included. Three lectures and four hours of laboratory per week, first semester. Required of all students who are candidates for Bachelor of Arts with major in Chemistry.

Five semester hours.

Ch102.—Inorganic Chemistry and Qualitative Analysis. Ionization, acidity and basicity, inorganic synthesis and analysis will be covered in this portion of the course. Prerequisite is Ch101. Three lectures and four hours of laboratory per week, second semester. Required of all students who are candidates for Bachelor of Arts with major in Chemistry.

Five semester hours.

Ch201.—Quantitative Analysis I. This course is required of Sophomores in the chemistry programs and includes lectures, discussions, and laboratory exercises on the fundamentals of gravimetric analysis. Emphasis will be on the stoichiometric separation of chemical constituents through precipitation and the interpretation of analytical data. Prerequisites: Ch101-Ch102. Two lectures and one four hour laboratory each week.

Ch202.—Quantitative Analysis II. Continuing in the format of Ch201 this semesters work covers the subject of volumetric analysis including acid-base titrations, redox reactions, complex ion formation and precipitation reactions. Prerequisite: Ch201. Two lectures and one four hour laboratory each week.

Four semester hours.

Ch301.—Organic Chemistry I. The preparation, structure and reactions of typical organic compounds such as the aliphatic, alicyclic and aromatic hydrocarbons will be studied. 3 lectures and four hours of laboratory per week, first semester. Required of all students who are candidates for a major in Chemistry. (Not offered 1964-65.)

Five semester hours.

Ch302.—Organic Chemistry II. A continuation of Ch301, this portion of the course will continue the study of monofunctional and polyfunctional compounds. 3 lectures and four hours of laboratory per week, second semester. Ch301 is a prerequisite. Required of all students who are candidates for a major in Chemistry. (Not offered 1964-65.)

Five semester hours.

Ch303.—Physical Chemistry I. Laws and nature of gases, liquids and solids, properties of solutions and thermochemistry. 3 lectures and four hours of laboratory per week, first semester. Required of all students who are candidates for a major in Chemistry. (Not offered 1964-65.)

Five semester hours.

Ch304.—Physical Chemistry II. A continuation of Ch303, this portion of the course will consider types of equilibria, chemical kinetics and electrochemistry. 3 lectures and four hours of laboratory per week, second semester. Ch303 is a prerequisite. Required of all students who are candidates for a major in Chemistry. (Not offered 1964-65.)

Five semester hours.

Ch401.—Advanced Inorganic Chemistry. This is an elective course for seniors who are candidates for a major in Chemistry. Advanced chemistry of atomic structure and chemical properties such as coordination complexes, inorganic stereoisomerism, complex ionic crystals. 2 lectures and four hours of laboratory per week, first semester. (Not offered 1964-65.)

Ch402.—Biochemistry. This is an elective course for seniors who are candidates for a major in Chemistry. The nature of protein, fat, carbohydrate, their reactions and role in living organisms will be studied. 2 lectures and four laboratory hours per week, either semester. (Not offered in 1964-65.)

Ch403.—Instrumental Methods of Analysis. This is an elective course for seniors who are candidates for a major in Chemistry. Use of instrumental and physiochemical methods of analytical chemistry accompanied by a discussion of the theory of operation will be treated in this course. Laboratory will involve the use of techniques such as infra-red spectroscopy. 2 lectures and four hours of laboratory per week, first semester. (Not offered in 1964-65.)

Ch404.—Qualitative Organic Analysis. This course is elective for seniors who are candidates for a major in Chemistry. Qualitative and quantitative anlysis of selected organic compounds will be used to teach the fundamentals of research techniques in the field of organic chemistry. 2 lectures and four hours of laboratory per week, second semester. (Not offered in 1964-65.)

PSYCHOLOGY

The department offers course work required for degrees in education, including educational psychology, educational measurement and the developmental psychology of the level at which the student is preparing to teach. The department also offers an elective program leading to a minor in Psychology. P101 is a prerequisite for all advanced courses.

P101.—Introduction to Psychology. Required of all Freshmen in the teacher preparation curricula, elective for others. The course covers the

fundamentals of the scientific study of behavior. Emphasis is placed upon behavioral development and change—particularly upon motivation, emotion, perception, personal adjustment, and social relations. Three hours a week, either semester.

Three semester hours.

P102.—Educational Psychology. A study of psychological facts and principles fundamental to education, teaching, and personal relationships between teacher and pupil. Topics considered in relation to school situations are physical and mental growth, intelligence, motivation, learning, transfer of training and mental hygiene of teacher and pupil. Three hours a week, second semester.

Three semester hours.

P201.—Child Growth and Development. Required of Sophomores who plan to elect the Elementary or Kindergarten-Primary Curriculum. The course attempts to acquaint the student with the psychological, physiological, emotional, intellectual, social, and language development of the child in the light of research reviewed. Emphasis is on preschool and elementary age children covering their normal development and various problems which may be evident in the early grades. Prerequisite: P101. Two hours a week, either semester.

P231.—Adolescent Psychology. Required of Sophomores who plan to elect the Secondary Curriculum. This course is a study of the sequence of growth in the adolescent with emphasis on intellectual growth, physical growth, social growth, emotional growth, ego development, communication development. Two hours a week, second semester.

Two semester hours.

P301.—Social Psychology. Prerequisite: P101. An introduction to the study of behavior of the individual in groups. The socialization process is viewed from the influence of institutions, cultural anthropology, and psychological theory. Three times a week.

Three semester hours.

P302.—Introduction to Statistics. This course covers correlations, tests of significance, graphs, and statistical designs. Three times a week.

Three semester hours.

P303.—Psychological Measurements. This course includes historical background of psychological testing. It also covers elementary statistical concepts, test standardization, the 1960 Stanford-Binet and Wechsler scales. Tests of Aptitude, Achievement, Personality, Attitudes, as well as Projective methods. Opportunity is given to demonstrate these tests at various age levels. Three times a week.

P304.—Psychology of Learning. The course will cover the various contemporary schools and systems of psychological thought in regard to the learning process. Three times a week.

Three semester hours.

P401.—Development of Personality. This course is designed to give a better understanding of personality development during the formative

years and the relationship of earlier experiences on the individual's behavior in adult life. Each phase of development from birth to maturity will be considered separately and the concomitant emotional problems will be discussed and supplemented with clinical case studies. Theoretical explanations will be presented for the underlying emotional disturbances in specific behavior syndromes. The study of personality will be approached from the psycho-dynamic point of view. Three hours a week, second semester.

P402.—Psychological Research Seminar. The student is given individual research projects with an end to publication. Lectures will cover design and format for presentation of data. Three times a week.

Three semester hours.

P403.—Abnormal Psychology. This course is concerned with the development of concepts and principles of unusual mental activity with special emphasis placed upon the relation of these principles and concepts to general, child and adult psychology. Discussion of abnormal phenomena will be approached through consideration of the normal. Symptoms and behavior of abnormal individuals are seen as exaggerated manifestations of normal functioning. Content will embrace the classification of mental diseases and the various methods of treatment by discussing the chemical and psychotherapeutic approaches to prevention and control of mental illness. Three hours a week.

Three semester hours.

P404.—Psychology of Exceptional Children. Psychology of children having superior or inferior intellectual ability, defective vision, hearing, and speech; various physical handicaps and brain damage. Three times a week.

Three semester hours.

P501.—Psychological Foundations of Education—Part I. This course covers the theoretical aspects of psychology for the classroom teacher. It includes a systematic analysis of the major schools of psychology and a study of the effects of heredity and environment. Reading in the following areas will be required: results of research on growth and development, theories of intelligence, concepts in measurement and evaluation, individual differences in capacity and achievement, and learning theory. Three hours a week, first semester.

P502.—Psychological Foundations of Education—Part II. This course is an advanced systematic exposition of various psychological principles related to teaching, with a special emphasis on the application of these principles to specific classroom situations. Readings will be required in the areas of emotional growth, mental health, motivation, discipline, dynamics of interpersonal relationships, social psychology, and adolescent psychology. Four hours a week, third quarter.

Two semester hours.

P522.—Educational Psychology. A required course in the Graduate School. This course will include a systematic analysis of the major schools of psychology. Readings will be required in the following areas: heredity and environment; results of research on growth and development, theories of intelligence, individual differences in capacity and achievement, learning, theory, emotional growth, needs and motivation, mental health, discipline, dynamics of interpersonal relationships and social psychology. Three hours a week, first semester.

Three semester hours.





STATE COLLEGE AT BOSTON

Dr. William F. Looney

President

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For admission to the College, write to Dr. George F. Aherne, Dean of Admissions

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For admission to the Graduate School, write to Dr. Francis P. O'Hara, Dean of Graduate Studies

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For admission to the Continuing Studies or Summer School, write to Mr. Thomas F. Dungan, Director of Continuing Studies
625 Huntington Avenue, Boston, Massachusetts 02115

